2.8.d.

Rulemaking Hearing Rules of Tennessee Department of Environment and Conservation Tennessee Water Quality Control Board Division of Water Pollution Control

Amendments

1. Rules 1200-4-3-.01 through 1200-4-3-.06 are amended by deleting them in their entirety and replacing them with the following:

Chapter 1200-4-3 General Water Quality Criteria

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1200-4-3-.01 Tennessee Water Quality Control Board

The Water Quality Control Act, T.C.A., §69-3-101, et seq., makes it the duty of the Water Quality Control Board to study and investigate all problems concerned with the pollution of the Waters of the State and with its prevention, abatement, and control; and to establish such standards of quality for any Waters of the State in relation to their reasonable and necessary use as the Board shall deem to be in the public interest; and establish general policies relating to pollution as the Board shall deem necessary to accomplish the purposes of the Act. The following general considerations and criteria shall be used to determine the permissible conditions of waters with respect to pollution and preventative or corrective measures required to control pollution in various waters or in different sections of the same waters.

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

1200-4-3-.02 General Considerations.

- (1) Tennessee water quality standards shall consist of the General Water Quality Criteria and the Antidegradation Statement found in Rule 1200-4-3, and the Use Classifications for Surface Waters found in Rule 1200-4-4.
- (2) Waters have many uses which in the public interest are reasonable and necessary. Such uses include: sources of water supply for domestic and industrial purposes; propagation and maintenance of fish and other aquatic life; recreation in and on the waters including the safe consumption of fish and shellfish; livestock watering and irrigation; navigation; generation of power; propagation and maintenance of wildlife; and the enjoyment of scenic and aesthetic qualities of waters.
- (3) The rigid application of uniform water quality is not desirable or reasonable because of the varying uses of such waters. The assimilative capacity of a stream for sewage and waste varies depending upon

- various factors and including the following: volume of flow, depth of channel, the presence of falls or rapids, rate of flow, temperature, natural characteristics, and the nature of the stream.
- (4) In order to permit the reasonable and necessary uses of the Waters of the State, existing pollution should be corrected as rapidly as practicable, and future pollution prevented through the best available technology economically achievable or that greater level of technology necessary to meet water quality standards; i.e., modeling and stream survey assessments, treatment plants or other control measures.
- (5) Since all Waters of the State are classified for more than one use, the most stringent criteria will be applicable. In cases where criteria for protection of more than one use apply at different stream flows (e.g., aquatic life versus recreation), the most protective will also be applicable.
- (6) Waters identified as wet weather conveyances according to the definition found in 1200-4-3-.04 (4), shall be protective of humans and wildlife that may come in contact with them and shall not adversely affect the quality of downstream waters. Applicable water quality standards will be maintained downstream of wet weather conveyances.
- (7) Where general water quality criteria are applied on a regional, ecoregional, or subecoregional basis, these criteria will be considered to apply to a stream if eighty percent of its watershed or catchment is contained within the unit upon which the criterion is based.
- (8) All fish and aquatic life metals criteria are expressed as total recoverable, except cadmium, copper, lead, nickel, silver, and zinc which are expressed as dissolved. Translators will be used to convert the dissolved fraction into a total recoverable permit limit. One of three approaches to metals translation will be used: (1) translator is the same as the conversion factor, (2) translator is based on relationships derived from STORET data, (3) a site-specific translator is developed. Where available, a site-specific translator is preferred. For assessing whether criteria for cadmium, copper, lead, nickel, silver, and zinc are exceeded by ambient water quality conditions, the dissolved criteria will also be translated in order to allow direct comparison to the ambient data, if total recoverable.
- (9) Site-specific criteria studies may be conducted on any appropriate fish and aquatic life criteria.
 - (a) Site-specific criteria studies based on a Water Effects Ratio (WER) calculated from the documented toxicity of a parameter in the stream in which it will be introduced may supersede the adopted criteria at a site. The Division shall approve a site-specific criteria developed by others provided that the WER methodology [Interim Guidance on Determination and Use of Water-effect Ratios for Metals (EPA-823-B-94-001)] is used, both the study plan and results are approved by the department, and the U.S. Environmental Protection Agency has concurred with the final site specific criterion value(s).
 - (b) Any site specific criterion based on methodologies other than the WER methodology which recalculate specific criterion, such as the Resident Species Method or the Recalculation Method, must be adopted as a revision to Tennessee water quality standards into Chapter 1200-4-3, and following EPA approval, can be used for Clean Water Act purposes.

References on this subject include, but are not limited to: Technical Support Document for Water Quality-based Toxics Control (EPA - 505/2-90-001); Technical Guidance Manual for Performing Waste Load Allocations: Book VIII (EPA/600/6-85/002a/002b/002c); MinteqA2, An Equilibrium Metal Speciation Model (EPA/600/3-87/012); Water Quality Standards Handbook, Second Edition (EPA-823-B-93-002); The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criteria (EPA-823-B-96-007); Interim Guidance on Determination and Use of Water-effect Ratios for Metals (EPA-823-B-94-001).

(10) Interpretation and application of narrative criteria shall be based on available scientific literature and EPA guidance and regulations.

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

1200-4-3-.03 Criteria For Water Uses.

- (1) Domestic Water Supply.
 - (a) Dissolved Oxygen There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.
 - (b) pH The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.
 - (c) Hardness or Mineral Compounds The hardness of or the mineral compounds contained in the water shall not appreciably impair the usefulness of the water as a source of domestic water supply.
 - (d) Total Dissolved Solids The total dissolved solids shall at no time exceed 500 mg/l.
 - (e) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as may impair the usefulness of the water as a source of domestic water supply.
 - (f) Turbidity or Color There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes (See definition).
 - (g) Temperature The maximum water temperature change shall not exceed 3C° relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2C° per hour. The temperature of impoundments where stratification occurs will be measured at a depth of 5 feet or mid-depth, whichever is less, and the temperature in flowing streams shall be measured at mid-depth.
 - (h) Coliform The concentration of the E. coli group shall not exceed 630 per 100 ml as a geometric mean based on a minimum of 5 samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purpose of determining the geometric mean, individual samples having an E. coli group concentration of less than 1 per 100 ml shall be considered as having a concentration of 1 per 100 ml.
 - (i) Taste or Odor The waters shall not contain substances which will result in taste or odor that prevent the production of potable water by conventional water treatment processes.
 - (j) Toxic Substances The waters shall not contain toxic substances, whether alone or in combination with other substances, which will produce toxic conditions that materially affect the health and safety of man or animals, or impair the safety of conventionally treated water supplies. Available references include, but are not limited to: Quality Criteria for Water (Section 304(a) of Public Law 92-500 as amended); Federal Regulations under Section 307 of Public Law 92-500 as amended; and Federal Regulations under Section 1412 of the Public Health Service Act as amended by the Safe Drinking Water Act, (Public Law 93-523). Limits set for some of the most commonly occurring toxic substances are as follows:

Compound	Criteria (ug/L)	Compound	Criteria (ug/L)
Antimony	6	Diquat	20
Arsenic	10	Endothall	100
Beryllium	4	Glyphosate	700
Barium	2000	Hexachlorobenzene	1
Cadmium	5	Hexachlorocyclopentadiene	50
Chromium, total	100	Oxamyl (Vydate)	200
Lead	5	Picloram	500
Cyanide (as free cyanide)	200	Simazine	4
Mercury	2	2,3,7,8 TCDD (Dioxin)	0.00003
Nickel	100	Benzene	5
Selenium	50	Carbon tetrachloride	5
Thallium	2	1,2-Dichloroethane	5
Alachlor	2	1,1-Dichloroethylene	7
Atrazine	3	1,1,1-Trichloroethane	200
Carbofuran	40	Trichloroethylene	5
Chlordane	2	Vinyl chloride	2
Dibromo chloropropane	0.2	para-Dichlorobenzene	75
2,4 Dichlorophennoxyacetic	70	cis 1,2-Dichloroethylene	70
Ethylene dibromide	0.05	1,2-Dichloropropane	5
Heptachlor	0.4	Ethyl benzene	700
Heptachlor epoxide	0.2	Monochlorobenzene	100
Lindane	0.2	ortho-Dichlorobenzene	600
Methoxychlor	40	Styrene	100
Polychlorinated biphenyls	0.5	Tetrachloroethylene	5
2,4,5 Trichloropheno-		Toluene	1000
xyprioponic acid	50	trans 1,2-Dichloroethylene	100
Pentachlorophenol	1	Xylenes, total	10000
Benzo(a)pyrene	0.2	Dichloromethane	5
Dalapon	200	1,2,4-Trichlorobenzene	70
Di(2-ethylhexyl) adipate	400	1,1,2-Trichloroethane	5
Di(2-ethylhexyl) phthalate	6	Endrin	2.0
Dinoseb	7	Toxaphene	3

(k) Other Pollutants - The waters shall not contain other pollutants in quantities that may be detrimental to public health or impair the usefulness of the water as a source of domestic water supply.

(2) Industrial Water Supply.

- (a) Dissolved Oxygen There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.
- (b) pH The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.
- (c) Hardness or Mineral Compounds The hardness of or the mineral compounds contained in the water shall not appreciably impair the usefulness of the water as a source of industrial water supply.
- (d) Total Dissolved Solids The total dissolved solids shall at no time exceed 500 mg/l.

- (e) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as may impair the usefulness of the water as a source of industrial water supply.
- (f) Turbidity or Color There shall be no turbidity or color in amounts or characteristics that cannot be reduced to acceptable concentrations by conventional water treatment processes.
- (g) Temperature The maximum water temperature change shall not exceed 3C° relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2C° per hour. The temperature of impoundments where stratification occurs will be measured at a depth of 5 feet or mid-depth, whichever is less, and the temperature in flowing streams shall be measured at mid-depth.
- (h) Taste or Odor The waters shall not contain substances which will result in taste or odor that would prevent the use of the water for industrial processing.
- (i) Toxic Substances The waters shall not contain toxic substances whether alone or in combination with other substances, which will adversely affect industrial processing.
- (j) Other Pollutants The waters shall not contain other pollutants in quantities that may adversely affect the water for industrial processing.

(3) Fish and Aquatic Life.

- (a) Dissolved Oxygen The dissolved oxygen shall not be less than 5.0 mg/l with the following exceptions.
 - 1. In streams identified as trout streams, including tailwaters, dissolved oxygen shall not be less than 6.0 mg/L.
 - 2. The dissolved oxygen concentration of trout waters designated as supporting a naturally reproducing population shall not be less than 8.0 mg/L. (Tributaries to trout streams or naturally reproducing trout streams should be considered to be trout streams or naturally reproducing trout streams, unless demonstrated otherwise. Additionally, all streams within the Great Smoky Mountains National Park should be considered naturally reproducing trout streams.)
 - 3. In wadeable streams in subecoregion 73a, dissolved oxygen levels shall not be less than a daily average of 5.0 mg/L with a minimum dissolved oxygen level of 4.0 mg/L.
 - 4. The dissolved oxygen level of streams in ecoregion 66 (Blue Ridge Mountains) not designated as naturally reproducing trout streams shall not be less than 7.0 mg/L.

Substantial and/or frequent variations in dissolved oxygen levels, including diurnal fluctuations, are undesirable if caused by man-induced conditions. Diurnal fluctuations shall not be substantially different than the fluctuations noted in reference streams in that region.

In lakes and reservoirs, the dissolved oxygen concentrations shall be measured at mid-depth in waters having a total depth of ten feet or less, and at a depth of five feet in waters having a total depth of greater than ten feet and shall not be less than 5.0 mg/L.

(b) pH - The pH value shall not fluctuate more than 1.0 unit over a period of 24 hours and shall not be outside the following ranges: 6.0 − 9.0 in wadeable streams and 6.5 − 9.0 in larger rivers, lakes, reservoirs, and wetlands.

- (c) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life.
- (d) Turbidity, Total Suspended Solids, or Color There shall be no turbidity, total suspended solids, or color in such amounts or of such character that will materially affect fish and aquatic life. In wadeable streams, suspended solid levels over time should not be substantially different than conditions found in reference streams.
- (e) Temperature The maximum water temperature change shall not exceed 3C° relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2C° per hour. The temperature of recognized trout waters shall not exceed 20°C. There shall be no abnormal temperature changes that may affect aquatic life unless caused by natural conditions. The temperature in flowing streams shall be measured at mid-depth.

The temperature of impoundments where stratification occurs will be measured at mid-depth in the epilimnion (see definition in 1200-4-3-.04) for warm water fisheries and mid-depth in the hypolimnion (see definition in 1200-4-3-.04) for cold water fisheries. In the case of large impoundments (100 acres or larger) subject to stratification and recognized as trout waters, the temperature of the hypolimnion shall not exceed 20°C.

A successful demonstration as determined by the state conducted for thermal discharge limitations under Section 316(a) of the Clean Water Act, (33 U.S.C. §1326), shall constitute compliance with this section.

- (f) Taste or Odor The waters shall not contain substances that will impart unpalatable flavor to fish or result in noticeable offensive odors in the vicinity of the water or otherwise interfere with fish or aquatic life. References include, but are not limited to: Quality Criteria for Water (section 304(a) of Public Law 92-500 as amended).
- (g) Toxic Substances The waters shall not contain substances or a combination of substances including disease causing agents which, by way of either direct exposure or indirect exposure through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), physical deformations, or restrict or impair growth in fish or aquatic life or their offspring. References on this subject include, but are not limited to: Quality Criteria for Water (Section 304(a) of Public Law 92-500 as amended); Federal Regulations under Section 307 of Public Law 92-500 as amended. The following criteria are for the protection of fish and aquatic life:

Compound	Criterion Maximum Concentration ug/l (CMC)	Criterion Continuous Concentration ug/l (CCC)
Arsenic (III)*	340	150
Cadmium**	2.0	0.25
Chromium, III**	570	74
Chromium, VI*	16	11
Copper**	13	9.0

Compound	Criterion Maximum Concentration ug/l (CMC)	Criterion Continuous Concentration ug/l (CCC)
Lead**	65	2.5
Mercury*	1.4	0.77
Nickel**	470	52
Selenium	20	5
Silver**	3.2	•
Zinc**	120	120
Cyanide***	22	5.2
Chlorine (TRC)	19	11
Pentachlorophenol****	19	15
Aldrin	3.0	
g-BHC – Lindane	0.95	
Chlordane	2.4	0.0043
4-4'-DDT	1.1	0.001
Dieldrin	0.24	0.056
a-Endosulfan	0.22	0.056
b-Endosulfan	0.22	0.056
Endrin	0.086	0.036
Heptachlor	0.52	0.0038
Heptachlor epoxide	0.52	0.0038
PCBs, total	•••	0.014
Toxaphene	0.73	0.0002
Tributyltin (TBT)	0.46	0.072

^{*} Criteria for these metals are expressed as dissolved.

CMC (dissolved) =
$$\exp\{m_A[\ln(\text{hardness})]+b_A\}$$
 (CF)

 $\label{eq:ccc} \mbox{CCC (dissolved)} = \exp\left\{ \mbox{m}_{\mbox{C}} \left[\ln(\mbox{hardness}) \right] + \mbox{b}_{\mbox{C}} \right\} \mbox{ (CF)}$

Chemical	M _A	$\mathfrak{b}_{\mathbf{A}}$	M _C	B _C	Freshwater Convers	Freshwater Conversion Factors (CF)
					CMC	CCC
Cadmium	1.0166	-3.924	0.7409	-4.719	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]	1.46203-[(În hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59			0.85	
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

^{**} Criteria for these metals are expressed as dissolved and are a function of total hardness (mg/L). Hardness-dependent metals criteria may be calculated from the following (values displayed above correspond to a total hardness of 100 mg/l and may have been rounded):

If criteria are hardness-dependent, the Criterion Maximum Concentration (CMC) and Criterion Continuous Concentration (CCC) shall be based on the actual stream hardness. When an ambient hardness of less than 25 mg/l is used to establish criteria for cadmium or lead, the hardness dependent conversion factor (CF) shall not exceed one. When ambient hardness is greater than 400 mg/l, criteria shall be calculated according to one of the following two options: (1) calculate the criterion using a default Water Effects Ratio (WER) of 1.0 and a hardness of 400 mg/l in the hardness based equation; or (2) calculate the criterion using a WER and the actual ambient hardness of the surface water in the hardness based equation. For information concerning metals translation and site-specific criteria, see 1200-4-3-.02 (9).

- 4*** If Standard Methods 4500-CN I (Weak Acid Dissociable), 4500-CN G (Cyanides Amenable to Chlorination after Distillation), or OIA-1677 are used, this criterion may be applied as free cyanide.
- Criteria for pentachlorophenol are expressed as a function of pH. Values displayed above correspond to a pH of 7.8 and are calculated as follows:

CMC =
$$\exp(1.005(pH) - 4.869)$$
 CCC = $\exp(1.005(pH) - 5.134)$

- (h) Other Pollutants The waters shall not contain other pollutants that will be detrimental to fish or aquatic life.
- (i) Iron The waters shall not contain iron at concentrations that cause toxicity or in such amounts that interfere with habitat due to precipitation or bacteria growth.
- (j) Ammonia The one-hour average concentration of total ammonia nitrogen (in mg N/L) shall not exceed the CMC (acute criterion) calculated using the following equations:

Where salmonid fish are present:

$$CMC = \frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}}$$

Or where salmonid fish are not present:

CMC =
$$\frac{0.411}{1 + 10^{7.204-pH}} + \frac{58.4}{1 + 10^{pH-7.204}}$$

The thirty-day average concentration of total ammonia nitrogen (in mg N/L) shall not exceed the CCC (chronic criterion) calculated using the following equations:

When fish early life stages are present:

When fish early life stages are absent:

In addition, the highest four-day average within the 30-day period shall not exceed 2.5 times the CCC.

(k) Nutrients - The waters shall not contain nutrients in concentrations that stimulate aquatic plant and/or algae growth to the extent that aquatic habitat is substantially reduced and/or the biological integrity fails to meet regional goals. Additionally, the quality of downstream waters shall not be detrimentally affected.

Interpretation of this provision may be made using the document Development of Regionally-based Interpretations of Tennessee's Narrative Nutrient Criterion and/or other scientifically defensible methods.

- (1) Coliform The concentration of the E. coli group shall not exceed 630 per 100 ml as a geometric mean based on a minimum of 5 samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purposes of determining the geometric mean, individual samples having an E. coli group concentration of less than 1 per 100 ml shall be considered as having a concentration of 1 per 100 ml. In addition, the concentration of the E. coli group in any individual sample shall not exceed 2,880 per 100 ml.
- (m) Biological Integrity The waters shall not be modified through the addition of pollutants or through physical alteration to the extent that the diversity and/or productivity of aquatic biota within the receiving waters are substantially decreased or adversely affected, except as allowed under 1200-4-3-.06.

Interpretation of this provision for any stream which (a) has at least 80% of the upstream catchment area contained within a single bioregion and (b) is of the appropriate stream order specified for the bioregion and (c) contains the habitat (riffle or rooted bank) specified for the bioregion, may be made using the most current revision of the Department's Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys and/or other scientifically defensible methods.

Interpretation of this provision for all other wadeable streams, lakes, and reservoirs may be made using Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers (EPA/841-B-99-002) or Lake and Reservoir Bioassessment and Biocriteria (EPA 841-B-98-007), and/or other scientifically defensible methods. Interpretation of this provision for wetlands or large rivers may be made using scientifically defensible methods. Effects to biological populations will be measured by comparisons to upstream conditions or to appropriately selected reference sites in the same bioregion if upstream conditions are determined to be degraded.

(n) Habitat - The quality of stream habitat shall provide for the development of a diverse aquatic community that meets regionally-based biological integrity goals. Types of habitat loss include, but are not limited to: channel and substrate alterations, rock and gravel removal, stream flow changes, accumulation of silt, precipitation of metals, and removal of riparian vegetation. For wadeable streams, the instream habitat within each subecoregion shall be generally similar to that found at reference streams. However, streams shall not be assessed as impacted by habitat loss if it has been demonstrated that the biological integrity goal has been met.

(o) Flow - Stream or other waterbody flows shall support the fish and aquatic life criteria.

(4) Recreation.

- (a) Dissolved Oxygen There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.
- (b) pH The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.
- (c) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to recreation.
- (d) Total Suspended Solids, Turbidity or Color There shall be no total suspended solids, turbidity or color in such amounts or character that will result in any objectionable appearance to the water, considering the nature and location of the water.
- (e) Temperature The maximum water temperature change shall not exceed 3C° relative to an upstream control point. The temperature of the water shall not exceed 30.5°C and the maximum rate of change shall not exceed 2C° per hour. The temperature of impoundments where stratification occurs will be measured at a depth of 5 feet, or mid-depth whichever is less, and the temperature in flowing streams shall be measured at mid-depth.
- (f) Coliform The concentration of the E. coli group shall not exceed 126 colony forming units per 100 ml, as a geometric mean based on a minimum of 5 samples collected from a given sampling site over a period of not more than 30 consecutive days with individual samples being collected at intervals of not less than 12 hours. For the purposes of determining the geometric mean, individual samples having an E. coli concentration of less than 1 per 100 ml shall be considered as having a concentration of 1 per 100 ml.

Additionally, the concentration of the E. coli group in any individual sample taken from a lake, reservoir, State Scenic River, Exceptional Tennessee Water or ONRW (1200-4-3-.06) shall not exceed 487 colony forming units per 100 ml. The concentration of the E. coli group in any individual sample taken from any other waterbody shall not exceed 941 colony forming units per 100 ml.

- (g) Taste or Odor The waters shall not contain substances that will result in objectionable taste or odor.
- (h) Nutrients The waters shall not contain nutrients in concentrations that stimulate aquatic plant and/or algae growth to the extent that the public's recreational uses of the waterbody or other downstream waters are detrimentally affected. Unless demonstrated otherwise, the nutrient criteria found in 1200-4-3-.03(3)(k) will be considered adequately protective of this use.
- (i) Nutrient Response Criteria for Pickwick Reservoir: those waters impounded by Pickwick Dam on the Tennessee River. The reservoir has a surface area of 43,100 acres at full pool, 9,400 acres of which are within Tennessee. Chlorophyll <u>a</u> (corrected, as described in Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998): the mean of the photic-zone (See definition) composite chlorophyll <u>a</u> samples collected monthly April through September shall not exceed 18 μg/l, as measured over the deepest point, main river channel, dam forebay.

(j) Toxic Substances - The waters shall not contain toxic substances, whether alone or in combination with other substances, that will render the waters unsafe or unsuitable for water contact activities including the capture and subsequent consumption of fish and shellfish, or will propose toxic conditions that will adversely affect man, animal, aquatic life, or wildlife. Human health criteria have been derived to protect the consumer from consumption of contaminated fish and water. The water and organisms criteria should only be applied to those waters classified for both recreation and domestic water supply. The criteria for recreation are as follows:

12		
	Water &	Organisms
	Organisms	Only
	Criteria *	Criteria
Compound	(ug/L)	(ug/L)
-	4:	(B =)
INORGANICS		
Antimony	5.6	640
Arsenic (c)	10.0	10.0
Mercury	0.05	0.051
Nickel	610	4600
Thallium	0.24	0.47
Cyanide	140	140
Dioxin **	0.00001	0.000001
	0.0000	0.00001
<u>VOLATILES</u>		
Acrolein	190	290
Acrylonitrile (c)	0.51	2.5
Benzene (c)	22	510
Bromoform (c)	43	1400
Carbon tetrachloride (c)	2.3	16
Chlorobenzene	130	1600
Chlorodibromomethane (c)	4.0	130
Chloroform (c)	57	4700
Dichlorobromomethane (c)	5.5	170
1,2-Dichloroethane (c)	3.8	370
1,1-Dichloroethylene	330	7100
1,2-Dichloropropane (c)	5.0	150
1,3-Dichloropropene (c)	3.4	210
Ethylbenzene	530	2100
Methyl bromide	47	1500
Methylene chloride (c)	46	5900
1,1,2,2-Tetrachloroethane (c)	1.7	40
Tetrachloroethylene (c)	6.9	33
Toluene	1300	15000
1,2-Trans-Dichloroethylene	140	10000
1,1,2-Trichloroethane (c)	5.9	160
Trichloroethylene (c)	25	300
Vinyl chloride (c)	0.25	24

	Water &	Organisms
	Organisms	Only
	Criteria *	Criteria
Compound	(ug/L)	(ug/L)
ACID EXTRACTABLES		
2-Chlorophenol	81	150
2,4-Dichlorophenol	77	290
2,4-Dimethylphenol	380	850
2-Methyl-4,6-dinitrophenol	13	280
2,4-Dinitrophenol	69	5300
Pentachlorophenol (c) (pH)	2.7	30
Phenol	21000	1700000
2,4,6-Trichlorophenol (c)	14	24
2, 1,0 211011101101101101 (0)	44	24
BASE NEUTRALS		
Acenaphthene	670	990
Anthracene	8300	40000
Benzidine (c)	0.00086	0.0020
Benzo(a)anthracene (c)	0.038	0.18
Benzo(a)pyrene (c)	0.038	0.18
Benzo(b)fluoranthene (c)	0.038	0.18
Benzo(k)fluoranthene (c)	0.038	0.18
Bis(2-Chlorethyl)ether (c)	0.30	5.3
Bis(2-Chloro-isopropyl)ether	1400	65000
Bis(2-Ethylhexyl)phthalate (c)	12	22
Butylbenzyl Phthalate	1500	1900
2-Chloronaphthalene	1000	1600
Chrysene (c)	0.038	0.18
Dibenz(a,h)Anthracene (c)	0.038	0.18
1,2-Dichlorobenzene	420	1300
1,3-Dichlorobenzene	320	960
1,4-Dichlorobenzene	63	190
3,3-Dichlorobenzidine (c)	0.21	0.28
Diethyl phthalate	17000	44000
Dimethyl phthalate	270000	1100000
Di-n-butyl phthalate	2000	4500
2,4-Dinitrotoluene (c)	1.1	34
1,2-Diphenylhydrazine (c)	0.36	2.0
Fluoranthene	130	140
Fluorene	1100	5300
Hexachlorobenzene (c)	0.0028	0.0029
Hexachlorobutadiene (c)	4.4	180
Hexachlorocyclopentadiene	40	1100
Hexachloroethane (c)	14	33
Ideno(1,2,3-cd)Pyrene (c)	0.038	0.18
Isophorone (c)	350	9600
Nitrobenzene	17	690
N-Nitrosodimethylamine (c)	0.0069	30
N-Nitrosodi-n-Propylamine (c)	0.05	5.1
N-Nitrosodiphenylamine (c)	33	60
Pyrene	830	4000
1,2,4-Trichlorobenzene	35	70

Compound	Water & Organisms Criteria * (ug/L)		Organisms Only Criteria (ug/L)
PESTICIDES .			
Aldrin (c)	0.00049		0.00050
a-BHC (c)	0.026		0.049
b-BHC (c)	0.091		0.17
g-BHC - Lindane	0.98		1.8
Chlordane (c)	0.0080		0.0081
4-4'-DDT (c)	0.0022		0.0022
4,4'-DDE (c)	0.0022		0.0022
4,4'-DDD (c)	0.0031		0.0031
Dieldrin (c)	0.00052		0.00054
a-Endosulfan	62		89
b-Endosulfan	62		89
Endosulfan Sulfate	62		89
Endrin	0.059		0.06
Endrin Aldehyde	0.29		0.30
Heptachlor (c)	0.00079	2	0.00079
Heptachlor epoxide (c)	0.00039		0.00039
PCB, total (c)	0.00064		0.00064
Toxaphene (c)	0.0028		0.0028

 (c) 10⁻⁵ risk level is used for all carcinogenic pollutants.
 * These criteria are for protection of public health due to consumption of water and organisms and should only be applied to these waters designated for both recreation and domestic water supply.

Total dioxin is the sum of the concentrations of all dioxin and dibenzofuran isomers after multiplication by Toxic Equivalent Factors (TEFs). Following are the TEFs currently recommended by EPA (subject to revision):

DIOXIN ISOMERS	TEF	FURAN ISOMERS	TEF
Mono-, Di-, & TriCDDs	0.0	Mono-, Di-, & TriCDFs	0.0
2,3,7,8 TCDD Other TCDDs	1.0 0.0	2,3,7,8 TCDF Other TCDFs	0.1 0.0
2,3,7,8 PeCDD Other PeCDDs	0.5 0.0	1,2,3,7,8 PeCDF 2,3,4,7,8 PeCDF Other PeCDFs	0.05 0.5 0.0
2,3,7,8 HxCDD Other HxCDDs	0.1 0.0	Other PeCDFs 2,3,7,8 HxCDF Other HxCDFs	0.0 0.1 0.0
2,3,7,8 HpCDD Other HpCDDs	0.01 0.0	2,3,7,8 HpCDF Other HpCDFs	0.01 0.0
OCDD	0.001	OCDF	0.001

- (k) Other Pollutants The waters shall not contain other pollutants in quantities which may have a detrimental effect on recreation.
- (l) Fish Consumption Advisories A public fishing advisory will be considered when the calculated risk of additional cancers exceeds 10 ⁻⁴ for typical consumers or 10 ⁻⁵ for atypical consumers (See definition). A "do not consume" advisory will be issued for the protection of typical consumers and a "precautionary advisory" will be issued for the protection of atypical consumers. The following formula will be used to calculate the risk of additional cancers:

$$R = qE$$

where:

- R= Plausible-upper-limit risk of cancer associated with a chemical in a fisheries species for a human subpopulation.
- q = Carcinogenic Potency Factor for the chemical (mg kg⁻¹ day⁻¹)⁻¹ estimated as the upper 95 percent confidence limit of the slope of a linear dose-response curve. Scientifically defensible Potency Factors will be used.
- E = Exposure dose of the chemical (mg kg⁻¹ day⁻¹) from the fish species for the human subpopulation in the area. E is calculated by the following formula:

- C = Concentration of the chemical (mg/kg) in the edible portion of the species in the area. The average levels from multiple fillet samples of the same species will be used. Catfish will be analyzed skin-off with the belly flap included in the sample. Gamefish and carp will be analyzed skin-on with the belly flap included in the sample. Sizes of fish collected for analysis will represent the ranges of sizes likely to be collected and consumed by the public. References on this subject include, but are not limited to: EPA's Guidance for Assessing Chemical Contaminant Data for use in Fish Advisories.
- I = Mean daily consumption rate (g/day averaged over 70 year lifetime) of the fish species by the human subpopulation in the area. 6.5 g/day will be used unless better site-specific information is available.
- X = Relative absorption coefficient, or the ratio of human absorption efficiency to test animal absorption efficiency of the chemical. Assumed to be 1.0 unless better information is available.

W = Average human mass (kg). 75 kg will be used.

For substances for which the public heath concern is based on toxicity, a "do not consume" advisory will be considered warranted when average levels of the substance in the edible portion of fish exceed U.S. Food and Drug Administration (FDA) Action Levels or EPA national criteria. Based on the rationale used by FDA or EPA for their levels, the Commissioner may issue precautionary advisories at levels appropriate to protect sensitive populations.

(m) Flow - Stream flows shall support recreational uses.

(5) Irrigation.

- (a) Dissolved Oxygen There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.
- (b) pH The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.
- (c) Hardness or Mineral Compounds The hardness of or the mineral compounds contained in the water shall not impair its use for irrigation.
- (d) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as may impair the usefulness of the water for irrigation purposes.
- (e) Temperature The temperature of the water shall not interfere with its use for irrigation purposes.
- (f) Toxic Substances The waters shall not contain toxic substances whether alone or in combination with other substances which will produce toxic conditions that adversely affect the quality of the waters for irrigation.
- (g) Other Pollutants The waters shall not contain other pollutants in quantities which may be detrimental to the waters used for irrigation.

(6) Livestock Watering and Wildlife.

- (a) Dissolved Oxygen There shall always be sufficient dissolved oxygen present to prevent odors of decomposition and other offensive conditions.
- (b) pH The pH value shall lie within the range of 6.0 to 9.0 and shall not fluctuate more than 1.0 unit in this range over a period of 24 hours.
- (c) Hardness or Mineral Compounds The hardness of or the mineral compounds contained in the water shall not impair its use for livestock watering and wildlife.
- (d) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as to interfere with livestock watering and wildlife.
- (e) Temperature The temperature of the water shall not interfere with its use for livestock watering and wildlife.
- (f) Toxic Substances The waters shall not contain substances whether alone or in combination with other substances, which will produce toxic conditions that adversely affect the quality of the waters for livestock watering and wildlife.
- (g) Other Pollutants The waters shall not contain other pollutants in quantities which may be detrimental to the water for livestock watering and wildlife.

(7) Navigation.

- (a) Solids, Floating Materials and Deposits There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character as to interfere with navigation.
- (b) Other Pollutants The waters shall not contain other pollutants in quantities which may be detrimental to the waters used for navigation.

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

- 1200-4-3-.04 Definitions. In addition to the meanings provided in the Water Quality Control Act (T.C.A. §§69-3-103), terms used in these rules shall have the meanings provided below.
 - (1) Atypical consumers Those persons in the vicinity of a stream or lake who due to physiological factors or previous exposure are more sensitive to specific pollutants than is the population in general. Examples of atypical consumers may include, but are not limited to: children; pregnant or nursing women; subsistence fishermen; frequent purchasers of commercially harvested fish; and agricultural, industrial, or military personnel who may have had previous occupational exposure to the contaminant of concern.
 - (2) Conventional Water Treatment Conventional water treatment as referred to in the criteria denotes coagulation, sedimentation, filtration, and chlorination or disinfection.
 - (3) Degradation The alteration of the properties of waters by the addition of pollutants or removal of habitat.
 - (4) De Minimis Alterations, other than those resulting in the condition of pollution or new domestic wastewater discharges, that represent either a small magnitude or a short duration shall be considered a de minimis impact and will not be considered degradation for purposes of implementing the antidegradation policy. Discharges other than domestic wastewater will be considered de minimis if they are temporary or use less than five percent of the available assimilative capacity for the substance being discharged. Water withdrawals will be considered de minimis if less than five percent of the 7Q10 flow of the stream is removed (the calculations of the low flow shall take into account existing withdrawals). Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the division finds that the impacts are offset by a combination of impact minimization and/or in-system mitigation.

If more than one activity has been authorized in a segment and the total of the impacts uses no more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow, they are presumed to be *de minimis*. Where total impacts use more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow they may be treated as *de minimis* provided that the division finds on a scientific basis that the additional degradation has an insignificant effect on the resource and that no single activity is allowed to consume more than five percent of the assimilative capacity, available habitat or 7Q10 low flow.

- (5) Ecoregion A relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.
- (6) Epilimnion The upper layer of water in a thermally stratified lake or reservoir. This layer consists of the warmest water and has a fairly uniform (constant) temperature.
- (7) Hypolimnion The lowest layer in a thermally stratified lake or reservoir. This layer consists of colder, more dense water, has a constant temperature and no mixing occurs. The hypolimnion of a eutrophic lake is usually low or lacking in oxygen.
- (8) Mixing Zone That section of a flowing stream or impounded waters in the immediate vicinity of an outfall where an effluent becomes dispersed and mixed.
- (9) Photic Zone the region of water through which light penetrates and where photosynthetic organisms live.
- (10) Reference condition A parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.
- (11) Reference Site Least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.
- (12) Stratification The tendency in lakes and reservoirs for distinct layers of water to form as a result of vertical change in temperature and, therefore, in the density of water. During stratification, dissolved oxygen, nutrients, and other parameters of water chemistry do not mix well between layers, establishing chemical as well as thermal gradients.
- (13) Subecoregion A smaller, more homogenous area that has been delineated within an ecoregion.
- (14) Thermocline The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth. Also called the metalimnion.
- (15) Wadeable streams Streams that can be sampled using a hand held, one meter square or smaller kick net without water and materials escaping over the top of the net.
- (16) Wet Weather Conveyances Man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table and which do not support fish or aquatic life and are not suitable for drinking water supplies. [T.C.A. § 4-5-202, T.C.A. § 69-3-105.]

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

1200-4-3-.05 Interpretation of Criteria.

- (1) Interpretation of the above criteria shall conform to any rules and regulations or policies adopted by the Water Quality Control Board.
- (2) The effect of treated sewage or waste discharge on the receiving waters shall be considered beyond the mixing zone except as provided in this paragraph. The extent to which this is practicable depends upon local conditions and the proximity and nature of other uses of the waters. Such mixing zones (See definition) shall be restricted in area and length and shall not (i) prevent the free passage of fish or cause aquatic life mortality in the receiving waters; (ii) contain materials in concentrations that exceed acute criteria beyond the zone immediately surrounding the outfall; (iii) result in offensive conditions; (iv) produce undesirable aquatic life or result in dominance of a nuisance species; (v) endanger the public health or welfare; or (vi) adversely affect the reasonable and necessary uses of the area; (vii) create a condition of chronic toxicity beyond the edge of the mixing zone; (viii) adversely affect nursery and spawning areas; or (ix) adversely affect species with special state or federal status.
- (3) The technical and economical feasibility of waste treatment, recovery, or adjustment of the method of discharge to provide correction shall be considered in determining the time to be allowed for the development of practicable methods and for the specified correction, to the extent allowable under Rule 1200-4-3-.06 (5).
- (4) Water quality criteria for fish and aquatic life and livestock watering and wildlife set forth shall generally be applied on the basis of the following stream flows: unregulated streams stream flows equal to or exceeding the 7-day minimum, 10-year recurrence interval; regulated streams all flows in excess of the minimum critical flow occurring once in ten years as determined by the division. However, criteria that are wholly or partially based on direct measurements of ambient aquatic community health, such as the nutrient, biological integrity, and habitat criteria for the fish and aquatic life use, shall support the designated use. These criteria should be considered independent of a specified minimum flow duration and recurrence. All other criteria shall be applied on the basis of stream flows equal to or exceeding the 30 day minimum 5 year recurrence interval.
- (5) In general, deviations from normal water conditions are undesirable, but the magnitude and duration of the deviations shall be considered in interpreting the above criteria. When interpreting pathogen data, samples collected during or immediately after significant rain events may be treated as outliers unless caused by point source dischargers. Such outlier data may be given less weight in assessment decisions than non-rain event sampling results.
- (6) The criteria and standards provide that all discharges of sewage, industrial waste, and other waste shall receive the degree of treatment or effluent reduction necessary to comply with water quality standards, or state or federal laws and regulations pursuant thereto, and where appropriate will comply with the "Standards of Performance" as required by the Tennessee Water Quality Control Act, (T.C.A., §§69-3-101, et seq.).
- (7) Where naturally formed conditions (e.g., geologic formations) or background water quality conditions are substantial impediments to attainment of the water quality standards, these natural or background conditions shall be taken into consideration in establishing any effluent limitations or restrictions on discharges to such waters.
- (8) There are cases in which the in-stream criteria as established by this rule are less than current chemical technological capabilities for analytical detection. In instances where permit limits established through implementation of these criteria are below analytical capabilities, compliance with those limits will be determined using the following detection limits, unless in specific cases other detection limits are demonstrated to be the best achievable because of the particular nature of the wastewater being analyzed:

REQUIRED METHOD DETECTION LEVELS [RDL] (ug/l) (Approved EPA Methods Must Be Used)

INORGANICS	RDL	BASE NEUTRALS	RDL
Antimony	2.0	A 1.4. 1	
Arsenic, total (c)	3.0	Acenaphthylene (c)	2.3
Arsenic (III) (c)	1.0	Anthracene	0.7
Beryllium (c)	1.0	Benzo(a)anthracene (c)	0.3
Cadmium	1.0 1.0	Benzo(a)pyrene (c)	0.3
Chromium, total	1.0	3,4-Benzofluoranthene (c)	0.3
Chromium (III)	1.0	Benzo(k)fluoranthene (c)	0.3
Chromium (VI)	10.0	Bis(2-Chloroethyl)ether (c)	1.0
Copper	1.0	Bis(2-Ethylhexyl)phthalate(c)	2.5
Lead	1.0	Chrysene	2.5
Mercury	0.2	1,2-Dichlorobenzene	2.0
Nickel		1,3-Dichlorobenzene	2.0
Selenium	10.0	1,4-Dichlorobenzene -	
Silver	2.0	para-Dichlorobenzene	4.4
Zinc	1.0	Diethyl phthalate	1.9
Cyanide	1.0	Dimethyl phthalate	1.6
Cyanide	5.0	Di-n-Butyl phthalate	2.5
Dioxin	0.00001	2,4-Dinitrotoluene (c)	1.0
Dioxiii	0.00001	Fluoranthene	2.2
<u>VOLATILES</u>		Fluorene	0.3
Acrolein		Hexachlorobenzene (c)	1.9
Acrylonitrile (c)	1.0	Hexachlorobutadiene (c)	5.0
Benzene (c)	1.0	Hexachloroethane (c)	0.5
Bromoform -	1.0	Nitrobenzene	10.0
	1.0	Phenanthrene	0.7
Tribromomethane (c)	1.0	Pyrene	0.3
Carbon tetrachloride (c) Chloroform -	1.0	2222	
	0.5	<u>PESTICIDES</u>	
Trichloromethane (c) Dichlorobromomethane (c)	0.5	Aldrin (c)	0.5
1,2-Dichloroethane (c)	1.0	g-BHC - Lindane (c)	0.5
1,1-Dichloroethylene (c)	1.0	Chlordane (c)	0.1
1,3-Dichloropropylene	1.0	4-4'-DDT (c)	0.1
Ethylbenzene	1.0	4,4'-DDE (c)	0.1
Methyl chloride -	1.0	4,4'-DDD (c)	0.1
Chloromethane (c)	• •	Dieldrin (c)	0.05
Methylene chloride -	1.0	a-Endosulfan	0.1
Dichloromethane (c)	1.0	b-Endosulfan	0.05
1,1,2,2-Tetrachloroethane (c)	1.0	Endrin	0.1
Tetrachloroethylene (c)	0.5	Heptachlor (c)	0.05
Toluene	0.5	Heptachlor epoxide (c)	0.08
1,1,1-Trichloroethane	1.0	PCB-1242 (c)	0.5
1,1,2-Trichloroethane (c)	1.0	PCB-1254 (c)	0.5
	0.2	PCB-1221 (c)	0.5
Trichloroethylene (c) Vinyl chloride (c)	1.0	PCB-1232 (c)	0.5
v myr emoride (c)	2.0	PCB-1248 (c)	0.5
ACID EXTRACTABLES		PCB-1260 (c)	0.5
2-Methyl-4,6-dinitrophenol-		PCB-1016 (c)	0.5
4,6-Dinitro-o-cresol	24.0	PCB, total (c)	0.5
2,4-Dinitrophenol	24.0	Toxaphene (c)	0.5
Pentachlorophenol	42.0		
2,4,6-Trichlorophenol (c)	5.0	(-)	
-, ·,o- i i temotophenot (c)	2.7	(c) - carcinogen	

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

1200-4-3-.06 Antidegradation Statement

It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act. Existing uses are those actually attained in the waterbody on or after November 28, 1975. Additionally, the Tennessee Water Quality Standards shall not be construed as permitting the degradation (see definition) of high quality surface waters. Where the quality of Tennessee waters is better than the level necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality will be maintained and protected unless the state finds, after intergovernmental coordination and public participation, that lowering water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

Sources exempted from permit requirements under the Water Quality Control Act should utilize all cost-effective and reasonable best management practices. Activities that cause or contribute to non-compliance with a water quality standard will not be allowed. Activities proposed for waters that are not identified as either being Exceptional Tennessee Waters (1200-4-3-.06(4)) or Outstanding National Resource Waters (1200-4-3-.06(5)), will be evaluated on the basis of 1200-4-3-.06(2) and (3).

Where new or increased temperature alterations are proposed, a successful demonstration as determined by the state under Section 316(a) of the Clean Water Act, 33 U.S.C. §1326, shall be considered to be in compliance with this section.

- (2) Unavailable conditions exist where water quality is at, or fails to meet, the criterion for one or more parameters. In unavailable conditions, new or increased discharges of a substance that would cause or contribute to a condition of impairment will not be allowed. Where impairment by habitat alteration exists, additional significant loss of habitat within the same area of influence shall not be authorized unless avoidance, minimization, or in-system mitigation can render the impact de minimis.
- (3) Available conditions exist where water quality is better than the applicable criterion for a specific parameter. In available conditions, new or additional degradation for that parameter will only be allowed if the applicant has demonstrated to the department that reasonable alternatives to degradation are not feasible.
 - (a) Analysis of reasonable alternatives shall be part of the application process and shall include a discussion of the feasibility of all potential alternatives, plus the social and economic considerations and environmental consequences of each. Alternatives analyses shall include, at a minimum, completed and accurate Worksheets A and B for public sector applicants or Worksheets A and G for private system applicants, except where these worksheets are inappropriate for the activity, in which case applicants may substitute materials that provide equivalent information. These forms are found in the EPA guidance document entitled Interim Economic Guidance for Water Quality Standards: Workbook (EPA 823/B-95-002) (Economic Guidance). Reasonable alternatives for the various activities include, but are not limited to the following actions.
 - Alternatives for discharges include connection to an existing collection system, land application, water reuse, water recycling, or other treatment alternatives. For small domestic discharges, connection to an existing system or land application will be considered preferable.
 - 2. For water withdrawals, alternatives include water conservation, water reuse or recycling, off-stream impoundments, water harvesting during high flow conditions, regionalization, withdrawing water from a larger waterbody, use of ground water, connection to another water supply with available capacity, and pricing structures that encourage a reduction in consumption.

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- 3. For activities that cause habitat alterations, alternatives that minimize or avoid degradation should be explored and explained by the applicant. These avoidance or minimization activities could include maintaining or enhancing buffer zones, bridging a stream rather than culverting it, altering the footprint of a project instead of relocating a stream, or using a culvert without a bottom, instead of one that is fully concreted.
- (b) For authorized new or expanded discharges, a record of the antidegradation determination(s) will be maintained and will be available for public review. Public participation and intergovernmental coordination will be provided in conjunction with permitting activities.
- (4) (a) Exceptional Tennessee Waters are waters that are in any one of the following categories:
 - 1. Waters within state or national parks, wildlife refuges, forests, wilderness areas, or natural areas;
 - 2. State Scenic Rivers or Federal Wild and Scenic Rivers;
 - Federally-designated critical habitat or other waters with documented non-experimental
 populations of state or federally-listed threatened or endangered aquatic or semi-aquatic
 plants, or aquatic animals;
 - Waters within areas designated as Lands Unsuitable for Mining pursuant to the federal Surface Mining Control and Reclamation Act where such designation is based in whole or in part on impacts to water resource values;
 - 5. Waters with naturally reproducing trout;
 - 6. Waters with exceptional biological diversity as evidenced by a score of 40 or 42 on the Tennessee Macroinvertebrate Index (or a score of 28 or 30 in subecoregion 73a) using protocols found in TDEC's 2006 Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys, provided that the sample is considered representative of overall stream conditions; or
 - 7. Other waters with outstanding ecological, or recreational value as determined by the department. When application of this provision is a result of a request for a permit, such preliminary determination is to be made within 30 days of receipt of a complete permit application.
 - (b) The department will maintain a list of waterbodies that have been reviewed and are known to have one or more of the above characteristics on its website and will make paper copies of that list available upon request.
 - (c) In waters identified as Exceptional Tennessee Waters no degradation will be allowed unless and until it is affirmatively demonstrated to the Department, after full satisfaction of the following intergovernmental and public participation provisions, that a change is justified as a result of necessary economic or social development and will not interfere with or become injurious to any classified uses existing in such waters. At the time of permit renewal, previously authorized discharges, including upstream discharges, which presently degrade Exceptional Tennessee Waters, will be subject to a review of updated alternatives analysis information provided by the applicant, but not to a determination of economic/social necessity. Public participation for these existing discharges will be provided in conjunction with permitting activities. Sources exempted from permit requirements under the Water Quality Control Act should utilize all cost-effective and reasonable best management practices.

- (d) Determination of Economic/Social Necessity Where reasonable alternatives to degradation to an Exceptional Tennessee Water is not feasible, applicants may ask the Department to determine that the proposed degradation is justified on the basis of economic or social necessity. The applicant shall have the burden of establishing to the Department that a change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any classified uses existing in such waters. The Department's determination that degradation is justified or unjustified shall be subject to review by the Water Quality Control Board under the following procedures.
 - I. If the Department determines that degradation is justified, it will notify the applicant, the federal and state intergovernmental coordination agencies, and third persons who requested notification of the determination. Within 30 days after the date of the notification, any affected intergovernmental coordination agency or affected third person may petition the Board for a declaratory order under Tennessee Code Annotated § 4-5-223, and the Board shall convene a contested case. After the Board has convened a contested case in response to a declaratory order petition under this part, the Department shall within 5 business days thereafter transmit the petition to the Administrative Procedures Division of the Secretary of State so the contested case may be docketed and an administrative law judge may be assigned to the case. If a declaratory order petition is timely filed, the Department shall not proceed further in processing the permit application until the petition has been resolved before the Board. In the contested case, the petitioner shall have the burden of proof, and the Department's determination shall carry no presumption of correctness before the Board. The applicant is a necessary party to the declaratory order contested case, and if the applicant does not participate in the contested case, the Board shall render a decision that degradation is not justified. intergovernmental coordination agency or third person petitions for a declaratory order within 30 days of the notification date, then the Department shall proceed with processing the permit application.
 - 2. A declaratory order contested case conducted under this provision shall be subject to the following procedures. Mediation may occur if all the parties agree. Any proposed agreed order resulting from mediation shall be subject to approval by the Board. In order to provide for an expedited proceeding, the contested case is subject to the following time limitations. The time periods specified in this part shall commence on the day after the contested case has been docketed by the Administrative Procedures Division of the Secretary of State and an administrative law judge has been assigned to the case. Any alteration of the time periods set out in this part shall be granted only upon agreement of all the parties, or when there have been unforeseen developments that would cause substantial prejudice to a party, or when the parties have agreed to mediation. Within 20 days, the parties shall confer to try and develop a proposed agreed scheduling order. If the parties are unable to agree, then each party shall submit a proposed scheduling order. and the administrative law judge, after a hearing, shall enter a scheduling order. All discovery shall be completed no later than 20 days prior to the date the hearing before the Board is to begin. Within 120 days, the hearing before the Board shall begin, but the Board on its own initiative may exceed 120 days to complete the hearing and render its final decision. In order for degradation of Exceptional Tennessee Waters to proceed pursuant to these rules, the Board must make a finding approving degradation by a majority vote of the members of the Board present and voting.
 - 3. If the Department determines that degradation is not justified, it will notify the applicant, the federal and state intergovernmental coordination agencies, and third persons who requested notification of the determination. The Department also will issue a tentative decision to deny the permit because degradation is not justified. In accordance with 1200-4-5-.06(4), the Department will provide the public with notice of and an opportunity to comment on its tentative denial decision. If no public hearing is requested within the

30 day public comment period, and if the Department does not alter its tentative decision to deny, the Department shall notify the applicant of its final decision to deny the permit because degradation is not justified. Within 30 days after receiving notice of the final decision to deny the permit, the applicant may seek review of the decision in a contested case before the Board in accordance with Tennessee Code Annotated § 69-3-105(i). Within 5 business days after the Department receives an applicant's written request for a contested case hearing before the Board, the Department shall transmit the written request to the Administrative Procedures Division of the Secretary of State so the contested case may be docketed and an administrative law judge may be assigned to the case. In the contested case, the applicant shall have the burden of proof, and the Department's determination shall carry no presumption of correctness before the Board. The federal and state intergovernmental coordination agencies, and third persons who requested notification of the Department's degradation determination will be notified by the Department of the applicant's permit appeal. The intergovernmental coordination agencies and third persons may seek to intervene in the contested case in accordance with Tennessee Code Annotated § 4-5-310.

(e) Information Requirements:

- 1. Applicants requesting an economic/social necessity determination to allow degradation under this provision must provide all information required in order for the Department to make a determination that reasonable alternatives to degradation are not feasible. Reasonable alternatives for discharges may include, but are not limited to, connection to an existing collection system, land application, water reuse, water recycling, or other treatment alternatives. Applicants for permit renewals of previously authorized discharges, including upstream discharges, which presently degrade Exceptional Tennessee Waters, shall submit as an alternatives analysis completed and accurate Worksheets A and B for public sector applicants or Worksheets A and G for private system applicants, except where these worksheets are inappropriate for the activity, in which case applicants may substitute materials that provide equivalent information. If needed, the Department may request the applicant to provide additional information. Alternatives analysis for new or additional degradation shall include, at a minimum, completed and accurate Worksheets A and B for public sector applicants or Worksheets A and G for private system applicants, except where these worksheets are inappropriate for the activity, in which case applicants may substitute materials that provide equivalent information. These forms are found in the EPA guidance document (Economic Guidance).
- 2. Additionally, to provide information to the Department regarding the applicant's claim of economic/social necessity, public sector applicants shall complete and submit, at a minimum, Forms O, P, Q, S, T, U, and AA, found in the EPA guidance document (Economic Guidance). Private sector applicants shall complete and submit, at a minimum, Forms O, R, V, W, X, Y, Z, and AB, found in the EPA guidance document (Economic Guidance). In instances when these worksheets are inappropriate for the activity, those applicants may substitute materials that provide equivalent information.

(f) Public Participation:

1. NPDES - Applicants seeking permission to degrade Exceptional Tennessee Waters shall publish a notice in a newspaper of general distribution in the area of the degradation. The notice shall identify the proposed discharge, provide the specific location including affected waters, describe the general basis for requesting permission to degrade Exceptional Tennessee Waters, inform the public of their opportunity to provide comments, and that a local public meeting will be held by the Department unless the Department notifies the public of its determination that the discharge will not result in

degradation. The applicant shall also post a sign within sight of a public road containing the same general information as the newspaper notice. A copy of the newspaper notice and proof of signage shall be provided to the Department. The public meeting held by the Department shall be near the proposed degradation.

- 2. ARAP/Section 401 Water Quality Certification If the Department determines that an applicant's proposed activity will not result in degradation, it will so notify the public. If the Department determines that the proposed activity will degrade Exceptional Tennessee Waters, and the applicant intends to seek permission to do so, then the applicant shall publish a notice in a newspaper of general distribution in the area of the degradation. The notice shall identify the proposed activity, provide the specific location including affected waters, describe the general basis for requesting permission to degrade Exceptional Tennessee Waters, inform the public of their opportunity to submit comments, and that a local public meeting will be held by the Department. The public meeting held by the Department shall be near the proposed degradation.
- 3. Timing of Public Participation Within 14 days of the Department being informed that an applicant will seek degradation, the applicant shall provide notice, as identified above, to the affected public. After the applicant provides public notice, the Department shall notify the public of the location, date and time of the public meeting in the area of degradation. Public notice by the Department shall occur at least 45 days prior to the meeting. For a proposed discharge, if the Department determines that the discharge will not result in degradation, it will so notify the public and in this circumstance, there will be no public meeting.
- (g) Intergovernmental Coordination A notice concerning the request for an economic/social necessity determination shall be provided by the Department to federal and state agencies with jurisdiction over fish, wildlife, shellfish, plant and wildlife resources, parks, and advisory councils for historic preservation.
- (5) The Department may recommend to the Water Quality Control Board that certain waterbodies be designated as Outstanding National Resource Waters (ONRWs). These shall be high quality waters which constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance.

Designation of ONRWs must be made by the Water Quality Control Board and will be accomplished in accordance with Section 69-3-105(a)(1) of the Tennessee Water Quality Control Act and through the appropriate rulemaking process.

In surface waters designated by the Water Quality Control Board as ONRWs, no new discharges, expansions of existing discharges, or mixing zones will be permitted unless such activity will not result in measurable degradation of the water quality. Existing water quality will be the criteria in these waters. Physical alterations that cause degradation to the ONRW will not be allowed. At time of permit renewal, previously authorized discharges, including upstream discharges, which presently degrade an ONRW, will be subject to alternatives analysis. Public participation for these existing discharges will be provided in conjunction with permitting activities.

An assessment of environmental, economic, and social impacts will be prepared for each stream or stream segment proposed for ONRW designation. The assessment content and process will be determined by the department but will contain sufficient data and information to inform the Water Quality Control Board about environmental, economic, and social impact of ONRW designation. Further, the process will provide for comprehensive public participation with a solicitation of position statements from appropriate local government agencies including but not limited to county and municipal governments, Soil Conservation Districts, Utility Districts, as well as other local, state, and

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federal agencies that may have responsibility for land and water resource management within the watershed of the proposed stream segment.

The following streams or portions of streams are designated as ONRW:

WATERBODY		PORTION DESIGNATED AS ONRW
(a)	Little River	Portion within Great Smoky Mountains National Park.
(b)	Abrams Creek	Portion within Great Smoky Mountains National Park.
(c)	West Prong Little Pigeon River	Portion within Great Smoky Mountains National Park upstream of Gatlinburg.
(d)	Little Pigeon River	From the headwaters within Great Smoky Mountains National Park downstream to the confluence of Mill Branch.
(e)	Big South Fork Cumberland River	Portion within Big South Fork National River and Recreation Area.
(f)	Reelfoot Lake	Tennessee portion of the lake and its associated wetlands.

The portion of the Obed River that is designated as a federal wild and scenic river as of June 22, 1999 is designated as ONRW, provided however, that if the current search for a regional water supply by the Cumberland Plateau Regional Water Authority results in a determination that it is necessary to utilize the Obed River as its source of drinking water, for that purpose the Obed shall be designated as an Exceptional Tennessee Water and any permit issued for that project, whether state, federal, or otherwise, shall be considered under the requirements for Exceptional Tennessee Waters.

- (6) All discharges of municipal sewage, industrial waste, or other wastes shall receive the greatest degree of effluent reduction which the Commissioner of the Tennessee Department of Environment and Conservation determines to be achievable through application of stringent effluent limitations and schedules of compliance either promulgated by the Water Quality Control Board; required to implement any applicable water quality standards, including where practicable, a standard permitting no discharge of pollutants; necessary to comply with a State Water Quality Plan; or necessary to comply with other State or Federal laws or regulations.
- (7) In implementing the provisions of these rules as they relate to interstate streams, the Commissioner of the Tennessee Department of Environment and Conservation and the Tennessee Water Quality Control Board will cooperate with the appropriate Federal Agency in order to assist in carrying out responsibilities under the Federal Water Pollution Control Act, as amended.

Authority: T.C.A. §§4-5-201 et seq., and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

2. Rules 1200-4-4-.01 through 1200-4-4-.14 are amended by deleting them in their entirety and replacing them with the following:

	Memphis Area Basin Hatchie River Basin	1200-4-407	Lower Tennessee River Basin (including Conasauga Basin)
1200-4-403	Obion-Forked Deer Basin	1200-4-4-,08	Upper Tennessee River Basin
1200-4-404	Tennessee River Basin -		Clinch River Basin
	Western Valley		French Broad River Basin
	Duck River Basin		Holston River Basin
1200-4-406	Elk River Basin	1200-4-412	Lower Cumberland River Basin
	(including Shoal Creek)		Upper Cumberland River Basin
		1200-4-414	Barren River Basin

Abbreviations for Designated Uses:

Domestic Water Supply	DWS
Industrial Water Supply	IWS
Fish and Aquatic Life	FAL
Trout Stream	TS
Naturally Reproducing Trout Stream	NRTS
Recreation	REC
Livestock Watering and Wildlife	LWW
Irrigation	IRR
Navigation	NAV

1200-4-4-.01 Memphis Area Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mississippi-Tennessee State Line (Mile 714.0)		X	X	X	X	X	X		
McKellar Lake Nonconnah Creek Wolf River Cypress Creek Wolf River Loosahatchie River Big Creek North Fork Cree	to Upstream End of Loosahatchie Bar (Mile 741.0) Mouth on Mississippi R. to Origin Mile 0.0 to Origin Mile 0.0 to 6.7 (L & N Railroad Bridge) Mile 0.0 to origin Mile 0.0 to origin Mile 6.7 to MissTN State Line (Mile 77.0) Mile 0.0. to 20.9 (Austin Peay Hwy Bridge) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin		x x	X X X X X X	X X X X X X	X X X X X X	X X X X X X	x		
Crooked Creek Trib. to Mile 3.0 of Crooked Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
Loosahatchie River Clear Creek Canal	Mile 20.9 (Austin Peay Hwy) to 30.7 Mile 0.0 to Origin at Mile 2.6 (Confluence of Hall Creek and Cypress Creek Canal)									
Cypress Creek Canal Loosahatchie River Middle Beaver Creek West Beaver Creek	Mile 0.0 to Origin Mile 30.7 to 45.5 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X			
East Beaver Creek Little Cypress Creek Canal Loosahatchie River Davis Creek Town Branch Loosahatchie River	Mile 0.0 to Origin Mile 45.5 to 50.2 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 50.2 to Origin			X X X X X X X	X X X X X X X X	X X X X X X X X	X X X X X X X			
All other surface waters named and un Basin, with the exception of wet weath have not been specifically noted shall	named in the Memphis Area ner conveyances, which			x	x	x	x			

Authority: T.C.A. §§4-5-201, et seq. and 69-3-105. Administrative History: Original rule certified June 7, 1974. Amendment filed December 1, 1975; effective December 30, 1975. Amendment filed November 25, 1977; effective December 26, 1977. Amendment filed March 30, 1983; effective April 29, 1983. Amendment filed July 16, 1991; effective August 30, 1991. Amendment filed May 16, 1995; effective July 30, 1995. Amendment filed July 13, 1999; effective October 11, 1999. Amendment filed October 24, 2003; effective January 7, 2004.

1200-4-402 Hatchie Riv	er Basın	L
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STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mile 741.0 to 820.0	x	X	X	Х	X	х	X		
Hatchie River Town Creek Cane Creek Alston Creek Big Muddy Canal Unnamed Trib, to Mile	Mile 0.0 to Mile 129.0 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	х	Х	X X X X	X X X X	X X X X	X X X X			
Sugar Creek 3.1 of Big Muddy Canal Sugar Creek Mill Creek Pugh Creek South Mill Creek Hatchie River Hatchie River Spring Creek Cypress Creek Tuscumbia River Cypress Creek Cypress Creek Cypress Creek Cypress Creek Cypress Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 2.0 Mile 0.0 to Origin Mile 2.0 to Origin Mile 2.0 to Origin Mile 129.0 to Mile 131.0 Mile 131.0 to Miss-Tenn State Line (Mile 188.5) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Miss-Tenn State Line (Mile 10.5) Mile 0.0 to 14.2 Mile 14.2 to 15.2 Mile 15.2 to Origin	x x	X X	X X X X X X X X X X X	X X X X X X X X X X X	X X X X X X X X X	X X X X X X X X X X X			
All other surface waters named and unna with the exception of wet weather conve not been specifically noted shall be class	yances, which have			x	х	x	x			

1200-4-4-.03 Obion-Forked Deer Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Mississippi River	Mile 820.0 to Mile 905.0 (Kentucky State Line)	X	X	X	X	X	X	X		
Obion River Running Reelfoot Bayou Reelfoot Lake Biffle Creek Reeds Creek Cool Springs Branch	Mile 0.0 to Confluence of North and South Fork Obion River (Mile 71.8) Mile 0.0 to Reelfoot Lake Spillway Entirety Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X X X X	X X X X X X	X X X X X X	X X X X X			

1200-4-4-.03 Obion-Forked Deer Basin (cont)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
North Fork Obion River Hoosier Creek First Creek Grove Creek Harris Fork Creek Walnut Fork Creek Trib. to Mile 3.8 of	Mile 0.0 to Origin Mile 0.0 to Kentucky-Tennessee State Line Mile 0.0 to Origin			X X X X X	X X X X X	X X X X X	X X X X X			
Walnut Fork Creek South Fork Obion River	Mile 0.0 to Origin Mile 0.0 to 38.9 (Formed at Confluence			X	X	X	X			
	of Beaver Creek and Crooked Creek)			X	Ÿ	X	X			
Mud Creek Cane Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
Trib. to Mile 9.8 of Cane Creek	Mile 0.0 to Origin			x	X	X	X			
Trib. to Mile 11.0 of Cane Creek	Mile 0.0 to Origin			X X	X X	X X	X X			
Brassfield Creek Trib. to Mile 0.5 of	Mile 0.0 to Origin									
Brassfield Creek Rutherford Fork	Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X			
Carroll Creek Wolf Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X X	X X	X X	X X			
E. Fork Wolf Creek Trib. to Mile 27.7 of	Mile 0.0 to Origin			Х	X	X	X			
Rutherford Fork Middle Fork Obion River	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X X	X			
Buckor Ditch Spring Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X			
Pritchett Branch	Mile 0.0 to Origin			X	X	X	χ̈́			
Bradford Creek Reedy Creek	Mile 0.0 to Origin Mile 0.0 to Origin			Ŷ	Ŷ	ŝ	ŝ			- 1
Lick Creek Clear Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X			
Beaver Creek Crooked Creek	Mile 0.0 to Origin		X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X			
Guins Creek Trib, to Mile 9.7 of	Mile 0.0 to Origin		Х							
Guins Creek Forked Deer River	Mile 0.0 to Origin Mouth at Obion River Mile 3.3 to Mile 20.3			X	X	X	X			
Tornot Don 14ve	at Confluence of North and South Fork			X	X	X	X	X		
South Fork Forked Deer	Mile 0.0 to 48.8			X X X	X X X	X X X	X X X	X		
Nixon Creek Little Nixon Creek	Mile 0.0 to Origin Mile 0.0 to Origin			x	Ŷ	x	â			
Old Channel Forked Deer- Trib. at Mile 35.8	Mile 0.0 to Origin			X	x	X	X			

1200-4-4-.03 Obion - Forked Deer River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
South Fork Forked Deer River North Fork of South Fork	Mile 48.8 to 70.3			X	X	X	X	X		
Forked Deer River Johnson Creek Anderson Branch Turkey Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 1.2			X X X X	X X X X	X X X X	X X X X			
Trib. to Mile 1.0 of Turkey Creek Turkey Creek South Fork Forked Deer River	Mile 0.0 to Origin Mile 1.2 to Origin Mile 70.3 to Origin			X X X	X X X	X X X	X X X			
Sugar Creek North Fork Forked Deer River North Fork Forked Deer River	Mile 0.0 to Origin Mile 0.0 to 5.8 Mile 5.8 to 33.9			X X X X X X X X X X X X X X X X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X X X X X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	x		
Middle Fork Forked Deer River Mosquito Creek Moize Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
Dyer Creek North Mud Creek Cow Creek Sand Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
North Fork Forked Deer River Trib, to Mile 857.5 of	Mile 33.9 to Origin									
Mississippi River Harris Ditch	Mile 0.0 to Origin Mile 0.0 to Origin			X X	X X	X X	X X			
All other surface waters named and u										
Deer Basin, with the exception of we which have not been specifically note	n weamer conveyances, ed shall be classified.			X	X	X	X			

1200-4-4-.04 Tennessee River Basin - Western Valley.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River Big Sandy River Big Sandy River West Sandy Creek Holly Fork Creek	Mile 49.1 (Tenn-Ky Line) to 215.1 (Tn-Miss Line) Mile 0.0 to 15.1 Mile 15.1 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	X	X X X	X X X X	X X X X	X X X X	X X X X	X X		

1200-4-4-.04 Tennessee River Basin - Western Valley (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Bailey Fork Creek Town Creek Big Beaver Creek Little Beaver Creek Hurricane Creek S. Fk Hurricane Cr Beaverdam Creek Cane Creek Cypress Creek Cypress Creek Cane Creek Wolf Creek Birdsong Creek Birdsong Creek Wolf Creek Eagle Creek Morgan Creek Beech River Beech Creek Little Hurricane Creek Beason Creek Beason Creek Beason Creek South Fork Beason Creek Dollar Creek Beech Creek Leatherwood Creek E. Fork Leatherwood Cr N. Fork Leatherwood Cr Town Branch Chambers Creek	Mile 0.0 to Origin Mile 0.0 to Second tributary Mile 0.0 to Second tributary Mile 0.0 to Origin Mile 0.0 to Second tributary Mile 0.0 to Second tributary Mile 0.0 to Origin Mile 0.0 to Second tributary Mile 0.0 to Origin Mile 0.0 to Second tributary Mile 0.0 to Origin Mile 0.0 to Second tributary Mile 0.0 to Origin Mile 0.0 to Origin	X X X	X X X X	FAL XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REC XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	LW XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	IRR XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X	X X X X	NRTS
All other surface waters named and Tennessee River Basin, with the e	d unnamed in the Western Valley exception of wet weather conveyances,			ılı.	- -	v	v			
which have not been specifically ne	oted shall be classified			X	X	X	X			

1200-4-4-.05 Duck River Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Duck River	Mile 0.0 to 67.0	X	X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Blue Creek	Mile 0.0 to 14.0	Х	X,	X	X	X	X			
Blue Creek Blue Creek	Mile 14.0 to 16.2		Α.	❖	- ♦	÷	.			
Buffalo River	Mile 16.2 to Origin Mile 0.0 to 24.0	x	X	Ŷ	Ŷ	Ŷ	Ŷ			
Cane Creek	Hickman Co. line to Lewis Co. line	A.	16	Ŷ	Ŷ	X	Ŷ		Х	
Buffalo River	Mile 24.0 to 26.0		X	Χ̈́	Ÿ	Ÿ	Ϋ́			
Buffalo River	Mile 26.0 to 38.0	X	X X	X	X	X	X			
Hurricane Creek	Mile 0.0 to Origin			\mathbf{x}	- X	X	X			X
Sinking Creek	Mile 0.0 to Origin Mile 38.0 to 41.1			X	X	X	X		Х	
Buffalo River	Mile 38.0 to 41.1		X	<u>् X</u>	X	X	X			
Buffalo River	Mile 41.1 to Origin	X X	X	X	X	X	X			
Green River	Mile 0.0 to 9.0	Х	X	X	X	X	X			
Green River	Mile 9.0 to 11.7	v	X	X.	Ž.	X	X			
Green River	Mile 11.7 to Origin	X X	Ą.	- ♦	Ų.	- ♦	.			
Rockhouse Creek Rockhouse Creek	Mile 0.0 to 6.0 Mile 6.0 to 9.5	^	Ŷ	÷	÷.	Ŷ	÷			
Rockhouse Creek	Mile 9.5 to Origin	х	X X X X X X	Ŷ	Ŷ	Ŷ	Ŷ			
Little Buffalo River	Mile 0.0 to Origin	72		Ŷ	Ŷ	Ŷ	Ŷ		x	
Hurricane Creek	Mile 0.0 to Origin			Ÿ	Ÿ	Ÿ	Ÿ		X	
Beaverdam Creek	Highway 100 to Sulfur Fork Cr			X	X	X	X			X
Sulfur Fork Creek	Mile 0.0 to Origin			X	X	Х	X			X X X
Piney River	Mile 0.0 to Origin	X X	X	X	X	X	Х			X
Mill Creek	Mile 0.0 to Origin	Х		X	X	X	X		X X	
Little Spring Creek	Mile 0.0 to Origin			X	X	X	X		Х	••
Big Spring Creek	Mile 0.0 to Origin			X	X	X	X		37	X
Garner Creek	Mile 0.0 to Origin			∴ X	X	X	X.	.61	X	Х
Bear Creek	Mile 0.0 to Origin	х	v	- X	X.	Ų.	♦			X
East Piney River	Mile 0.0 to 4.0 Mile 4.0 to 6.1	Λ.	X X X X	Ŷ	÷	Ŷ	÷			
East Piney River East Piney River	Mile 4.0 to 0.1 Mile 6.1 to Origin	X	Ŷ	Ŷ	ୁ ଫୁ	Ŷ	Ŷ			
Defeated Camp Creek	Mile 0.0 to 4.4	7.	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ			
Defeated Camp Creek	Mile 4.4 to Origin			X	X	X	X			
Defeated Branch	Mile 0.0 to Origin			X	X	X	X			
Duck River	Mile 67.0 to 71.5		Х	X	X	X	X			
Duck River	Mile 71.5 to 123.2	X	X	X	X	X	X			
Big Bigby Creek	Mile 0.0 to Origin	X X X	X	X	X	X	X			
Sugar Fork	Mile 0.0 to 1.9	Х	X	X	X	X	X			
Sugar Fork	Mile 1.9 to 2.9		X	X	X	X	X			
Sugar Creek	Mile 0.0 to 0.7	v	Ą.	♦	V	♦	.			
Sugar Creek	Mile 0.7 to Origin	X X X	X X X X X X X	Ŷ	Ŷ	Ŷ	Ŷ			
Quality Creek Big Swan Creek	Mile 0.0 to Origin Mile 0.0 to Origin	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ			
Little Swan Creek	Mile 0.0 to Origin	^	А	Ŷ	Ŷ	X	x		x	
Cathey's Creek	Mile 0.0 to Origin	х	X	X	Ÿ	$\bar{\mathbf{x}}$	X			

1200-4-4-.05 Duck River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Duck River Little Bigby Creek Rutherford Creek Duck River Big Rock Creek Big Rock Creek Big Rock Creek Duck River Duck River Duck River Duck River Duck River Garrison Fork Creek Garrison Fork Creek Garrison Fork Creek Carrison Fork Creek Carrison Fork Creek Little Duck River	Mile 123.2 to 127.2 Mile 0.0 to Origin Mile 0.0 to Origin Mile 127.2 to 217.0 Mile 10.0 to 14.0 Mile 14.0 to 16.9 Mile 16.9 to Origin Mile 217.0 to 221.3 Mile 221.3 to 244.0 Mile 244.0 to 248.6 (Normandy Dam) Mile 248.6 to 266.5 Mile 0.0 to 2.7 Mile 2.7 to 3.3 Mile 3.3 to Origin Mile 266.5 to Origin Mile 268.5 to Origin Mile 268.5 to Origin Mile 0.0 to Origin	X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X		х	
All other surface waters named and unnamed in the Duck River										
Basin, with the exception of wet weat which have not been specifically note.			x	x	x	x				

1200-4-4-.06 Elk River Basin (including Shoal Creek).

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Shoal Creek Clack Branch Loretto Branch Little Shoal Creek Shoal Creek	Tenn-Ala State Line (Mile 20.6) to Mile 56.9 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 56.9 to Origin (Jet of B. Dry Branch & Beeler Fk)	х	X X X X	X X X X	X X X X	X X X X	X X X X		x	
Factory Creek Chisholm Creek Crowson Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	х		X X Y	X X Y	X X Y	X X Y		X	v
Elk River Elk River	Tenn-Ala State Line (Mile 33.6) to 36.3 Mile 36.3 to 90.5	X X	X X	X X	X X	X X	X X	х		Λ.
Richland Creek Buchannan Creek	Mile 0.0 to 20.0 Mile 0.0 to Origin		Х	X X	X X	X	X			

1200-4-4-.06 Elk River Basin (including Shoal Creek) (cont)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Richland Creek Richland Creek Pigeon Roost Creek Robertson Fork Town Creek Holland Creek Elk River	Mile 20.0 to 23.3 Mile 23.3 to Origin Mile 0.0 to Origin Mile 90.5 to 133.3 (Tims Ford Dam) Mile 0.0 to Origin	x x	X XX XX XX XX XX XX XX XX XX XX XX XX X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X XX XX XX XX XX XX XX XX XX XX XX XX X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		x	
Mulberry Creek East Fork Mulberry Cr. East Fork Mulberry Cr.	Mile 0.0 to 11.1 Mile 11.1 to Origin	x	X	X X	X	X	XX			
Spring Branch	Mile 0.0 to Origin Mile 133.3 to Origin	X X X	X X	X X	X	X X	X	10		
Elk River Beans Creek Factory Branch	Mile 0.0 to Origin Mile 0.0 to Origin	Α.	X X	X X	X X	X X	X X			
Mathias Branch Hurricane Creek	Mile 0.0 to Origin Mile 0.0 to Origin		X X	X	X	X	X			
Boiling Fork Creek Wagner Creek	Mile 0.0 to Origin Mile 0.0 to Origin	X X	X	X	X	X	X			
Rock Creek Rollins Creek	Mile 0.0 to Origin Mile 0.0 to 2.5	x	X	X	X	X	X			
Rollins Creek Mud Creek Caldwell Creek	Mile 2.5 to Origin Mile 0.0 to Origin Mile 0.0 to Origin		X X	X X	X X	x X	X X			
All other surface waters named and un	named in the Elk River									
Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified				x	x	x	x			

1200-4-4-.07 Lower Tennessee River Basin (including Conasauga River)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River Unnamed Tributary Battle Creek Swedens Creek	Tenn-Ala State Line (Mile 416.5) to the POT Light (Mile 448.0) At Tenn. River Mile 417.5; Mile 0.0 to Origin Mile 0.0 to 17.3 (Martin Spring) Mile 0.0 to Origin	x x	x x	X X X X	X X X X	X X X X	X X X X	x	X X	

1200-4-4-.07 Lower Tennessee River Basin (including Conasauga River) (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Big Fiery Gizzard Little Fiery Gizzard	Mile 0.0 to 4.5 Mile 0.0 to Origin			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Unnamed Trib.	At Little Fiery Gizzard Mile 0.6; Mile 0.0 to Orig	gin		X	X	X	X		.,	
Big Fiery Gizzard Big Fiery Gizzard	Mile 4.5 to 5.5 Mile 5.5 to Origin			X	X	X	X		X	
Battle Creek	Mile 17.3 to Origin	x	Х	Ŷ	Ŷ	Ŷ	x			
Sequatchie River	Mile 0.0 to 3.5	X X X	X X X	X	X	X	X	X		
Sequatchie River Little Sequatchie River	Mile 3.5 to 41.0 Mile 0.0 to confluence of Sawmill Creek	X	Х	X	X	X	X			
Little Sequatchie River	Confluence of Sawmill Creek to confluence of G	rays Creek		x	x	X	x		Х	
Little Sequatchie River	Confluence of Grays Creek to Origin	-		X	X	X	X			
Pocket Creek Clifty Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X		X	
Sewanee Creek	Mile 0.0 to 4.0			Ŷ	- x	Ŷ	Ŷ			
Sewanee Creek	Mile 4.0 to Origin	X X X		X	X	X	X			
Holywater Creek	Mile 0.0 to Origin	X		Ŷ.	X	Ŷ	X			
Scott Creek Coops Creek	Mile 0.0 to Origin Mile 0.0 to Origin	^		Ŷ	Ŷ	Ŷ	Ŷ			
Sequatchie River	Mile 41.0 to 43.9			X	X	X	X			
Sequatchie River	Mile 43.9 to 74.0	х	X	X	X	X	X			
Sequatchie River Sequatchie River	Mile 74.0 to 78.4 Mile 78.4 to 105.9	x	x	Ŷ	Ŷ	Ŷ	Ŷ			
Sequatchie River	Mile 105.9 to 108.9	X X	X X	X	X	X	X		X	
Sequatchie River	108.8 to Origin		х	Ŷ.	Ϋ́	X	X	x		
Tennessee River Shoal Creek	Mile 448.0 to 460.6 (Chattanooga Creek) Mile 0.0 to Origin		^	Ŷ	Ŷ	Ŷ	Ŷ	•		
Unnamed Tributary	At Tenn. River Mile 458.7: Mile 0.0 to Origin			x	x	X	X			
Lookout Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Black Creek Chattanooga Creek	Mile 0.0 to Origin Mile 0.0 to Georgia-Tenn State Line		x	Ŷ	Ŷ	Ŷ	Ŷ			
Tennessee River	Mile 0.0 to Georgia-Tenn State Line Mile 460.6 to 499.4 (Hiwassee)	х	X X	Ŷ	Ŷ	Ÿ	x	X		
Citico Creek	Mile 0.0 to Origin		v	X	X	X	X			
South Chickamauga Creek Friar Branch	Mile 0.0 to Georgia-Tenn State Line Mile 0.0 to Origin		X	X	Ŷ	Ŷ	Ŷ			
West Chickamauga Creek	Mile 0.0 to Georgia-Tenn State Line		X X	Ŷ	Ŷ	x	x			
Spring Creek	Mile 0.0 to Georgia-Tenn State Line		X	X	X	X	X			
Mackey Branch	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X			
Ryall Springs Br. Unnamed Tributary	At Tenn. River Mile 469.2; Mile 0.0 to Origin			â	â	x	â			
North Chickamauga Creek	Mile 0.0 to 13.2			X	X	X	X			
Unnamed Tributary	At N. Chickamauga Creek Mile 0.7; Mile 0.0 to Origin Mile 13.2 to 15.0			X	X	X	X		X	
North Chickamauga Creek North Chickamauga Creek	Mile 15.2 to 15.0 Mile 15.0 to Origin			Ŷ	x	Ŷ	x		Λ	
Wolflever Creek	Mile 0.0 to Origin			X	X	X	X			
Sale Creek	Mile 0.0 to Origin			X	X	X	X			
Roaring Creek Brush Creek	Mile 0.0 to Origin Mile 0.0 to Origin		100	â	â	â	â			
Timil Civat										

1200-4-4-.07 Lower Tennessee River Basin (including Conasauga River) (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Hiwassee River Candies Creek South Mouse Creek Chatata Creek Little Chatata Cr. Chestuee Creek Middle Creek	Mile 0.0 to 23.9 Mile 0.0 to Origin	х	х	X X X X X	X X X X X X	X X X X X	X X X X X	х		
Middle Creek Ocoee River Ocoee River Sylco Creek Dutch Creek Greasy Creek Rock Creek	Mile 1.9 to Origin Mile 0.0 to Benton Station Bridge Benton Station Bridge to mile 17.0 Mile 0.0 to Origin	X X X	X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X X X X	
Clear Creek Ocoee River Caney Creek (East Fork) Big Creek Goforth Creek	Mile 0.0 to Origin Mile 17.0 to Ococe #3 Powerhouse Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin		X	X X X X	X X X X	X X X X	X X X X		x	x
Ocoee River Rock Creek Ocoee River Rough Creek West Fork Rough Creek	Ococe #3 Powerhouse to Rock Creek Mile 0.0 to Origin Rock Creek to mile 37.9 (Georgia-Tenn State Line) Mile 0.0 to Origin Mile 0.0 to Origin		X X	X X X X	X X X X	X X X X	X X X X		X X X	X X
North Potato Creek Burra Creek Brush Creek Belcher Creek Deweese Creek	Mile 0.0 to North Carolina-Tenn State Line) Mile 0.0 to 1.5 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x x	x	X X X X	X X X X	X X X X	X X X X			
Conasauga Creek Conasauga Creek Cane Creek Unnamed Branch	Mile 0.0 to Cog Hill Mill Dam Cog Hill Mill Dam to Ruralville Mill Mile 0.0 to Origin Mile 0.0 to Origin	Α		X X X X	X X X X	X X X X	X X X X		х	
Crockett Spring Cr Conasauga Creek Gee Creek Spring Creek Yellow Creek	Mile 0.0 to Origin Ruralville Mill to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X		x x	x
Big Lost Creek Little Lost Creek Smith Creek Wolf Creek Turtletown Creek	Mile 0.0 to Origin Mile 0.0 to N. Carolina Line			X X X X X	X X X X	X X X X X	X X X X		X X X X	x
Brushy Creek Coker Creek	Mile 0.0 to N. Carolina Line Joe Brown Highway to Origin			X	X	X X	X		X X X	

1200-4-4-.07 Lower Tennessee River Basin (including Conasauga River) (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Hiwassee River North Mouse Creek Spring Creek Spring Creek Dry Valley Creek North Mouse Creek Little North Mouse Cr. Little North Mouse Cr. North Mouse Creek Oostanaula Creek Oostanaula Creek Oostanaula Creek Oostanaula Creek Oostanaula Creek	Mile 23.9 to 34.4 Mile 0.0 to 10.0 Mile 0.0 to 18.7 Mile 18.7 to Origin Mile 0.0 to Origin Mile 10.0 to 30.1 Mile 0.0 to 4.1 Mile 4.1 to Origin Mile 30.1 to Origin Mile 20.0 to 26.0 Mile 26.0 to 28.0 Mile 28.0 to 33.8 Mile 37.5 to Origin	x x x	x x x	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	х		
Hiwassee River	Mile 34.4 to 64.9 (North Carolina Line)	X	X	x	X	x	x		X	
All other surface waters named and un River Basin, with the exception of we which have not been specifically note	t weather conveyances,			x	x	x	x			

1200-4-4-.08 Upper Tennessee River Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River Richland Creek Little Richland Creek Broyles Branch Piney River Piney River Piney River Town Creek Whites Creek Whites Creek Black Creek Caney Creek Caney Creek Cardiff Creek Clear Creek	Mile 499.4 (Hiwassee) to 567.8 (Clinch) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 5.5 Mile 5.5 to 6.5 (U.S. Hwy. 27 Bridge) Mile 6.5 to Origin Mile 0.0 to Origin	x	X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	x x x	x	

1200-4-4-.08 Upper Tennessee River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Tennessee River Martin Branch	Mile 567.8 to 601.1 Mile 0.0 to Origin	X	х	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	х		
Stamp Creek	Mile 0.0 to Origin			X	Х	X	Х			
Greenbriar Branch	Mile 0.0 to Origin			X	X	X	X			
Hines Creek	Mile 0.0 to Origin Mile 0.0 to 9.4			X	X	X	X			
Sweetwater Creek	Mile 0.0 to 9.4	X	X	X	X	X	X			
Bacon Creek	Mile 0.0 to Origin			X	X.	X.	X			
Sweetwater Creek	Mile 9.4 to 19.0	v		÷	.	♦	- ♦			
Sweetwater Creek Sweetwater Creek	Mile 19.0 to 21.0 Mile 21.0 to Origin	X X	X	÷	÷	Ŷ	÷			
Unnamed Spring Branch	Mile 0.0 to Origin	^	Λ.	Ŷ	Ŷ	Ŷ	Ŷ			
Little Tennessee River	Mile 0.0 to 19.0	Х	X	Ŷ	Ŷ	Ŷ	Ŷ	Х		
Fork Creek	Mile 0.0 to Origin	46	26	Ŷ	Ŷ	Ŷ	Ŷ	7.		
Unnamed Tributary	Mile 0.0 to Origin			Ÿ	X	Ÿ	Ÿ			
Bat Creek	Mile 0.0 to Origin			Ÿ	X	Ÿ	Ÿ			
Tellico River	Mile 0.0 to 5.0	X	X X	X	X	X	X	X		
Tellico River	Mile 5.0 to 28.0	X X	X	X	X	X	X			
Ballplay Creek	Upper 7 miles			X	X	Х	Х		X	
Cane Creek	Mile 0.0 to Origin Mile 28.0 to 41.0			X	X	X	X		X X X X	
Tellico River	Mile 28.0 to 41.0	X		X	X	X	X		X	
Wildcat Creek	Mile 0.0 to Origin			X	X	X	X		X	
Turkey Creek	Mile 0.0 to Origin			X	X	X	X		X	37
Bald River	Mile 0.0 to Origin			X	Ž.	X.	Ž.			X X X X X
Kirkland Creek	Mile 0.0 to Origin			₩	Ą.	- ♦ ::	.			.
Henderson Creek	Mile 0.0 to Origin			.	❖	.	\$			\$
Barrett Branch Service Branch	Mile 0.0 to Origin Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			Ŷ
Brookshire Branch	Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			Ŷ
North River	Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			Ŷ
Long Branch	Mile 0.0 to Origin			Ŷ	Ÿ	Ŷ	Ŷ		X	16
Hemlock Branch	Mile 0.0 to Origin			Ÿ	Ÿ	Ÿ	Ÿ		X X	
McNabb Creek	Mile 0.0 to Origin			X	X	X	X			X
Laurel Branch	Mile 0.0 to Origin			X	X	X	X			X
Big Cove Branch	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	Х	Х			X
Round Mountain Br	Mile 0.0 to Origin			X	X	X	Х			X
Service Tree Br	Mile 0.0 to Origin			X	X	X	X			X
Sugar Cove Br	Mile 0.0 to Origin			X	X	X	X			X
Meadow Branch	Mile 0.0 to Origin			X	X	X	X			X
Roaring Br	Mile 0.0 to Origin			Ų.	❖	.	♦			\$
Indian Creek	Mile 0.0 to Origin			· •	Ŷ	Ŷ	÷.			÷.
Panther Branch	Mile 0.0 to Origin	х	X	Ŷ	Ŷ	Ŷ	Ŷ			Ŷ
Tellico River Sycamore Creek	Mile 41.0 to 50.0 (TN - NC Line) Mile 0.0 to Origin	Λ.	А	Ŷ	Ŷ	Ŷ	Ŷ			Ŷ
Rough Ridge Creek	Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			X X X X X X X X X X X X X X X X X X X
Rough Ringe Creek	Mile oro to Ottkiii			46	7.	41	16			76

1200-4-4-.08 Upper Tennessee River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Little Tennessee River Citico Creek Jakes Creek Slide Hollow Little Citico Creek Jake Best Creek Doublecamp Creek Mill Branch Flint Branch Crowder Branch Citico Creek N. Fk Citico Creek Indian Valley Br South Fork Citico Creek Ike Camp Branch Falls Branch Cochran Creek Abrams Creek Panther Creek Mill Creek Bell Cove Branch Kingfisher Creek Buckshank Branch Rabbit Creek Hannah Branch Rabbit Creek Hannah Branch Peckerwood Br Wilson Branch Stony Branch Arbutus Branch Mill Creek Forge Creek Coalen Ground Br Bower Creek Tipton Sugar Cove Ekanneetlee Br Tater Branch McCaulley Branch	Mile 19.0 to 30.0 Mile 4.5 to 16.0 Mile 0.0 to 3.0 Mile 0.0 to 2.0 Mile 0.0 to 3.5 Mile 0.0 to Origin	DOM X	IWS X	FAL XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REC XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	LW XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	IRR XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	NAV X	TS X X X X X X X X X X X X X X X X X X X	X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Rowans Branch Anthony Creek Shop Creek Tabcat Creek Parson Branch Bible Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X X X X X	X X X X X	X X X X X	X X X X X		х	X X X X X X
Slickrock Creek Little Slickrock Cr Little Tennessee River	Tennessee portion Mile 0.0 to Origin Mile 30.0 to 49.7 (TNN.C. Line)	x	x	X X X	X X X	X X X	X X X		x	X

1200-4-4-.08 Upper Tennessee River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Morgan Branch Abrams Branch First Creek Tennessee River Town Creek Gallagher Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 601.1 to 636.6 (Little River) Mile 0.0 to Origin Mile 0.0 to Origin	X X	X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	x		
Turkey Creek Sinking Creek #1 Ten Mile Creek Sinking Creek #2 Unnamed Trib. Lackey Creek	Mile 0.0 to Origin Mile 0.0 to Origin From Sink to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	х	Х	X X X X X	X X X X X	X X X X	X X X X			
Unnamed Branch Little River Polecat Branch Stock Creek McCall Branch	Mile 0.0 to Origin Mile 0.0 to 33.0 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x	x	X X X X X	X X X X	X X X X X	X X X X			
Russell's Branch Pistol Creek Duncan Branch Culton Creek Tedford Br	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X X	X X X X	X X X X		v	
Hesse Creek Cane Creek Beard Cane Cr Little River M. Pr. Little River	Upper 5 miles Upper 2.0 miles Upper 1.5 miles Mile 33.0 to Origin Mile 0.0 to Origin	х		X X X X	X X X X	X X X X	X X X X		X X X	X X X
W. Prong Little R. Laurel Creek Meadow Br Spruce Flats Br Sams Creek Thunderhead Pr	Mile 0.0 to Oriğin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X X	X X X X	X X X X	X X X X			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Shut-in Cr Shut-in Cr Lynn Camp Prong Marks Creek Meigs Creek Little Greenbriar Creek	Mile 0.0 to Origin			X X X X X	X X X X X	X X X X	X X X X			X X X X
Mannis Branch Blanket Creek Shields Branch Jakes Creek Newt Prong	Mile 0.0 to Origin			X X X X	X X X X X	X X X X	X X X X			X X X X
Laurel Branch Fish Camp Prong Goshen Prong Silers Prong	Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X			X X X X

1200-4-4-.08 Upper Tennessee River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Rich Branch Rough Creek Meigs Post Prong Grouse Creek Tennessee River Tennessee River Tennessee River Tennessee River Tennessee River Tennessee River Knob Creek Flenniken Branch Unnamed Branch	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 6.0 to 638.6 Mile 636.6 to 638.6 Mile 638.6 to 640.0 Mile 640.0 to 643.4 Mile 646.4 to 646.4 Mile 646.4 to of 52.2 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x x x	X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X X X X	15	X X X X
Unnamed Branch Fourth Creek Third Creek Third Creek Second Creek First Creek	Mile 0.0 to Oriğin Mile 0.0 to Origin Mile 0.0 to 4.9 Mile 4.9 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x	X X	X X X X X	X X X X X X	X X X X X	X X X X X			
All other surface water named and un River Basin, with the exception of we which have not been specifically note	t weather conveyances,			x	x	x	x			

1200-4-4-.09 Clinch River Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Clinch River Emory River Little Emory River Middle Fork Little Emory River Davis Branch Unnamed Tributary Crooked Fork Creek Unnamed Tributary	Mile 0.0 to 4.4 (Emory River) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 0.2 At Emory River (Mile 16.4); Mile 0.0 to 1.0 Mile 0.0 to 4.9 At Crooked Fork Creek (Mile 4.9); Mile 0.0 to Origin	X X X	X X X	X X X X X X	X X X X X X X	X X X X X X X	X X X X X X	Х		

1200-4-4-.09 Clinch River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Crooked Fork Creek Flat Fork Creek Unnamed Tributary	Mile 4.9 to Origin Mile 0.0 to Origin At Flat Fork (Mile 2.3); Mile 0.0 to Origin	X		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X XX XX XX XX XX XX XX XX XX XX XX XX X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X X	
Stockstill Creek	Mile 0.0 to Origin			X	X	X	X			
Obed River	Mile 0.0 to 40.T			X	X	X	X			
Daddy's Creek	Mile 0.0 to Origin			X	X	X	X			
Basses Creek	Mile 0.0 to Origin			X	X.	X	X.			
Fox Creek	Mile 0.0 to Origin			\$	♦	♦	•			
Scantling Branch	Mile 0.0 to Origin			Ŷ	❖	Ŷ	÷.			
Unnamed Trib. Unnamed Tributary	At Scantling Branch (Mile 1.2); Mile 0.0 to Origin At Obed River (Mile 34.6); Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Obed River	Mile 40.1 to Origin	X	Х	Ŷ	Ŷ	Ŷ	Ŷ			
Unnamed Tributary	At Obed River (Mile 45.4); Mile 0.0 to Origin	<i>A</i> .	Λ	Ŷ	Ŷ	Ŷ	Ŷ			
Clinch River	Mile 4.4 to 12.0 (Poplar Creek)	X	Х	Ÿ	Ÿ	Ÿ	Ÿ	X		
Poplar Creek	Mile 0.0 to 0.5		X X	X	X	X	X			
Poplar Creek	Mile 0.5 to Origin			X	X	Х	X			
East Fork Poplar Creek	Mile 0.0 to Origin			X	X	X	X			
Bear Creek	Mile 0.0 to Origin			X	X	X	X			
Indian Creek	At Poplar Creek (Mile 14.3); Mile 0.0 to Origin			X	X	X	X			
Clinch River	Mile 12.0 to 20.0	X	X	X	X	Х	X			
White Oak Creek	Mile 0.0 to Origin			X	X		X			
Melton Branch	Mile 0.0 to Origin	w	w	X	X	v	X	v		
Clinch River	Mile 20.0 to 39.6	X X	Ŷ	Ž.	Ą.	₩.	❖	X		
Beaver Creek	Mile 0.0 to 8.4	A	❖	♦	≎	÷	.			
Beaver Creek	Mile 8.4 to 10.4	X	X X X X X	÷.	÷	÷	÷			
Beaver Creek	Mile 10.4 to 17.5	Λ.	Ŷ	÷	÷	Ŷ	÷.			
Beaver Creek	Mile 17.5 to 17.9 Mile 17.9 to 21.6	х	Ŷ	Ŷ	Ŷ	Ŷ	Ŷ			
Beaver Creek	Mile 21.6 to 23.6	^	Λ	Ŷ	Ŷ	Ŷ	Ŷ			
Beaver Creek Beaver Creek	Mile 23.6 to 29.4	Х	х	Ŷ	Ŷ	Ŷ	Ŷ			
Beaver Creek	Mile 29.4 to 31.4	<i>A</i> .	1	Ŷ	Ŷ	Ŷ	Ŷ			
Beaver Creek	Mile 31.4 to Origin	X	X	Ŷ	Ÿ	Ÿ	Ÿ			
Unnamed Tributary	At Beaver Creek (Mile 44.1); Mile 0.0 to Origin			Ÿ	Ÿ	Ÿ	Ÿ			
Clinch River	Mile 39.6 to 41.1	X	Х	X	X	X	X	Х		
Scarboro Creek	Mile 0.0 to Origin			X	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X			
Clinch River	Mile 41.1 to 46.7	X	X	X	X	X	X	X		
Bull Run Creek	Mile 0.0 to 1.0			X	X	X	X			
Bull Run Creek	Mile 1.0 to Origin	X		X	X	X	X			
Nelson Branch	Mile 0.0 to Origin			X	X	X	X			
Blaze Branch	At Nelson Branch (Mile 5.0); Mile 0.0 to Origin			X	X	X	X	37		
Clinch River	Mile 46.7 to 47.8	X	X	X	X	X	X	X		
Worthington Branch	At Clinch River (Mile 47.8); Mile 0.0 to Origin	v	v	Ą.	₩.	X.	Ą.	x		
Clinch River	Mile 47.8 to 50.7	X	X	÷.	Ŷ	Λ	Ŷ	Λ		
Braden Branch	At Clinch River (Mile 50.7); Mile 0.0 to 1.7			Ŷ	Ŷ	Y	Ŷ			
Braden Branch	Mile 1.7 to Origin	х	х	Ŷ	Ŷ	X X X	Ŷ	Х		
Clinch River	Mile 50.7 to 51.1 At Clinch River (Mile 51.1); Mile 0.0 to Origin	Λ	Λ	Ŷ	Ŷ	Ŷ	â	А		
Unnamed Tributary	At Citien Mact fathe 21:17, fathe 6:0 to Other			^	^	л				

1200-4-4-.09 Clinch River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Clinch River	Mile 51.1 to 61.5	X	X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X		
Clinch River	Mile 61.5 to 66.2	Х	X	Ŷ	X	X	X			
Hinds Creek	At Clinch River (Mile 65.0); Mile 0.0 to Origin Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Buffalo Creek Clinch River	Mile 66.2 to 79.8	х	Х	Ŷ	Ŷ	Ŷ	Ŷ		Х	
Cane Creek	At Clinch River (Mile 71.3); Mile 0.0 to Origin	••	••	X	$\ddot{\mathbf{x}}$	X	X			
Blowing Spring Fork	At Cane Creek (Mile 1.9); Mile 0.0 to Origin			X	X	X	X			
Coal Creek	At Clinch River (Mile 75.0); Mile 0.0 to Origin			X	X	X	X		X	
Unnamed Tributary	At Coal Creek (Mile 8.6); Mile 0.0 to Origin	w	v	X	X	X	X			
Clinch River	Mile 79.8 to 202.1 (Virginia Stateline)	X X	X X	÷	÷.	Ŷ	÷.			
Cove Creek	Mile 0.0 to 15.1	Λ.	Λ	Ŷ	Ŷ	Ŷ	Ŷ			
Unnamed Tributary Cove Creek	At Cover Creek (Mile 13.7); Mile 0.0 to Origin Mile 15.1 to 16.1		X	Ŷ	x	Ŷ	x			
Cove Creek	Mile 16.1 to Origin	х	x	X	X	$\ddot{\mathbf{x}}$	X			
Bruce (Brush) Creek	Mile 0.0 to Origin			X	X	X	X			
Dog Creek	At Bruce Creek (Mile 0.9); Mile 0.0 to Origin			X	X	X	X			
Ünnamed Trib.	At Dog Creek (Mile 2.0); Mile 0.0 to Origin	37	37	X	X	X	X			
Big Creek	At Clinch River (Mile 83.0); Mile 0.0 to 15.6	Х	X X	X	Ą.	X.	.			
Big Creek	Mile 15.6 to 17.6		Λ	Ŷ	Ŷ	Ŷ	Ŷ			
Big Creek	Mile 17.6 to Origin At Big Creck (Mile 20.4); Mile 0.0 to Origin	x	x	Ŷ	Ŷ	Ŷ	Ŷ			
Ollis Creek Powell River	At Clinch River (Mile 88.8); Mile 0.0 to 115.7	X	X X	Ŷ	Ÿ	Ÿ	X			
Gap Creek	At Powell River (Mile 57.7); Mile 0.0 to Origin			X	X	X	X			
Unnamed Spring Branch	From Sinkhole to Origin			X	X	X	X			
Russell Creek	At Powell River (Mile 82.4); Mile 0.0 to Origin			X	X	X	X		37	
Clear Creek	Mile 0.0 to 2.0			X	X	X	X		X X	
White Creek	Mile 0.0 to 2.0			X	- X	₩	Ŷ		Α.	
Mill Creek	At Clinch River (Mile 98.0); Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Byram's Creek	At Mill Creek (Mile 0.5); Mile 0.0 to Origin At Byram's Creek (Mile 2.3); Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Unnamed Tributary Ball Creek	Mile 0.0 to Origin	Х		Ÿ	Ÿ	$\ddot{\mathbf{x}}$	X		X	
Poorland Creek	At Clinch River (Mile 104.2): Mile 0.0 to Origin			X	X	X	X			
Dry Tributary	At Poorland Creek (Mile 2.5); Mile 0.0 to Waste Outfall			X	X		X			
Hunting Creek	At Poorland Creek (Mile 2.5); Mile 0.0 to Waste Outfall At Clinch River (Mile 118.3); Mile 0.0 to Origin			X	X	X X X X X	X			
Unnamed Tributary	At Hunting Creek (Mile 2.0): Mile 0.0 to Origin			X	X.	X	X			
Big War Creek	At Clinch River (Mile 164.4); Mile 0.0 to 8.0			•	Ŷ	Ŷ	Ŷ			
Flat Gap Creek	At Big War Branch (Mile 7.0); Mile 0.0 to Origin Mile 8.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Big War Creek North Fork Clinch River	At Clinch River (Mile 192.0); Mile 0.0 to 2.2			Ŷ	Ŷ	Ϋ́	x		X	
MOUNT LAW CHIEN MAG	At Cillian Maci (mile 172.0), mile on to all	X	X	X	X	X	X			
All other surface waters named and u	nnamed in the Clinch River									
Basin, with the exception of wet weat	her conveyances,				v	v	v			
which have not been specifically treat	ted shall be classified			X	X	X	X			

1200-4-4-.10 French Broad River Basin.

STREAM ·	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
French Broad River Hines Creek Unnamed Tributary Unnamed Tributary Cement Mill Creek Boyds Creek Unnamed Tributary	Mile 0.0 to 102.2 (N. Carolina-Tenn Line) Mile 0.0 to Origin At Hines Creek (Mile 1.7) At Hines Creek (Mile 3.7) Mile 0.0 to Origin Mile 0.0 to Origin At Boyds Creek (Mile 9.7)	Х	X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Unnamed Tributary Little Pigeon River Gist (Guess) Creek	At Boyds Creek (Mile 11.5) Mile 0.0 to 2.9 Mile 0.0 to Origin	x	x	X X X	X X X	X X	X X X			
Little Pigeon River W. Prong Little Pigeon R. W. Prong Little Pigeon R.	Mile 2.9 to 4.8 Mile 0.0 to 4.5 Mile 4.5 to 7.9	X X	X X X X X	X X X	X X X	X X X	X X X		х	
W. Prong Little Pigeon R. W. Prong Little Pigeon R. W. Prong Little Pigeon R.	Mile 7.9 to 8.8 Mile 8.8 to 13.0 Mile 13.0 to 14.0	x	X X X	X X X	X X X	XXX	X X X	4	X X X	±1
W. Prong Little Pigeon R. Dudley Creek Little Dudley Creek Roaring Fork Creek Baskins Creek	Mile 14.0 to 19.0 Mile 0.0 to Origin		X	X X X X X	X X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X X		X X X X X X	x x
Norton Creek Leconte Creek W. Prong Little Pigeon R. Twomile Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 19.0 to Origin Mile 0.0 to Origin	x		X X X	X X X	X X X	X X X		Х	
Fighting Creek Sugarland Branch Big Branch Road Prong	Mile 0.0 to Origin			X X X	X X X	X X X X	X X X			X X X X X X X
Cole Branch Alum Cave Creek Walker Camp Pr	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			X X
Little Pigeon River Little Pigeon River E.F. Little Pigeon R. Dunn Creek	Mile 4.8 to 20.3 Mile 20.3 to Origin Mile 0.0 to Origin Mile 0.0 to 15.8	X X X X	X X X X	X X X X	X X X	X X X	X X X	**	x x	
Dunn Creek Ogle Springs Br Bird Creek	Mile 15.8 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	X	X	X X X	X X X	X X X	X X X	28		Х
Webb Creek Soak Ash Creek Timothy Creek Redwine Creek	Mile 0.0 to Great Smoky Mtns Pk Boundary (Mile 5.8) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X		х	X X X X X
Noisy Creek Texas Creek Webb Creek Copeland Creek	Mile 0.0 to Origin Mile 0.0 to Origin Great Smoky Mts boundary to origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X		x	X X

1200-4-4-.10 French Broad River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Injun Creek Rhododendron Creek Porters Creek False Gap Prong Kalanu Prong	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X XX XX XX XX XX XX XX XX XX XX XX XX X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X X X X X X X X X X X X X X X X X X X	
Long Branch Cannon Creek Lowes Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X		X X X	
Boulevard Prong Shutts Prong Middle Prong Little Pigeon	Mile 0.0 to Oriğin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X		X X X	
Ramsey Prong Chapman Prong Eagle Rocks Branch	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X		X X X	
Lost Prong Buck Fork	Mile 0.0 to O ri gin Mile 0.0 to Origin			X X Y	X X X	X X	X X X		X X	
Muddy Creek Clear Creek City Spring Tributary	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x		X X	X X	X X	X			
Indian Creek Ball Creek Unnamed Tributary	Mile 0.0 to Origin Mile 0.0 to Origin At Ball Creek (Mile 2.9); Mile 0.0 to Origin			X X	X X		X X			
Leadvale Creek Clear Creek Nolichucky River	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 5.3	х	х	X X X	X X X	X X X	X X X			
Long Creek Sinking Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X X Y	X X Y	X X Y	X X			
Nolichucky River Nolichucky River Slate Creek	Mile 5.3 to 7.7 Mile 7.7 to 100.8 (N. Carolina-Tenn Line) Mile 0.0 to Origin	X	X	X X	X X	X X	X X			
Bent Creek Mud Creek Williams Branch	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
Lick Creek Lick Creek Black Creek	Mile 0.0 to 49.0 Mile 49.0 to Origin Mile 0.0 to Origin	х	X X	X X X	X X X	X X X X X X X X X X X X X X X X X X X	X X X			
War Branch Unnamed Tributary Little Chucky Creek	Mile 0.0 to 0.5 At Lick Creek (Mile 36.1); Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X		X X X			
Mosheim Branch Unnamed Trib.	Mile 0.0 to Origin At Mosheim Branch (Mile 2.0); Mile 0.0 to Origin			X X V	X X Y	X X	X X Y			
Unnamed Tributary Gap Creek Furness Branch	At Little Chucky Creek (Mile 17.2); Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin		,	X X	X X	X X X X	X X			
Cove Creek Flag Branch	Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X			

1200-4-4-.10 French Broad River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Richland Creek Crazy Creek Unnamed Tributary Unnamed Tributary Camp Creek Jennings Creek Dry Creek Dry Creek Dry Creek Oavis Creek College Creek Moon Creek Sinking Creek Little Limestone Creek Horse Creek Squibb Branch Cassi Creek, East and West Fork Clarks Creek Devil Fork Branch Long Arm Branch Chigger Branch	Mile 0.0 to Origin Sinkhole to Origin At Crazy Creek (Mile 1.3); Mile 0.0 to 0.5 Mile 0.5 to Origin Mile 0.0 to Origin	DOM	IWS X X	FAL XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REC XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X	IRR XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	NAV	TS	X X X
Chigger Branch Broad Shoal Creek California Creek North Indian Creek Rock Creek Duck Creek Red Fork Creek Clear Fork Branch South Indian Creek Mill Creek Granny Lewis Creek Lower Higgins Creek Birchfield Camp Br Big Branch Spivey Creek Coffee Ridge Cr Watts Branch	Mile 0.0 to Origin Mile 0.0 to Origin Upstream of Erwin Mile 0.0 to Origin	x	x	X X X X X X X X X X X X X X X X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		55	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Tumbling Creek Rocky Fork Creek Flint Creek Devil Fork Creek Sams Creek Upper Higgins Creek E. Fk Higgins Cr Rice Creek Jones Creek Long Branch	Mile 0.0 to Origin			X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X X X X	X X X X X X X X X X X X X X X X X X X			X X X X X X X X

1200-4-4-.10 French Broad River Basin (cont.)

Pigeon River Matthew Creek Sinking Creek Sinking Creek Cosby Creek N. Fork Bogard Cr Mile 0.0 to 25.9 (Tenn-N. Car. Line) Mile 0.0 to 0.7 Mile 0.0 to 5.2 Mile 5.2 to Origin Mile 0.0 to 4.3 Mile 0.0 to 4.3 Mile 0.0 to 0.7 Mile 0.0 to 0.7 Mile 0.0 to 0.7 Mile 0.0 to 0.7)	X	X X	X X X X X X X X X X X X X X X X X X X	X X X X X	X X X X X	X X X X X	X X X	x x
Indian Camp Creek Mile 0.0 to Origin Mile 0.0 to Origin	*7		2	X X X X X X X X X X X X X X X X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	x x x x	X X X X X X X X X X
All other surface waters named and unnamed in the French Broad River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified			G	x	х	x	x		

1200-4-4-.11 Holston River Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Holston River Unnamed Branch Sand Branch Swan Pond Creek Pratt Branch Woods Creek Unnamed Branch Maccash Branch Roseberry Creek Unnamed Branch Unnamed Branch Unnamed Branch Big Flat Creek Little Flat Creek Little Flat Creek Lyon Creek Lyon Creek Lyon Creek Unnamed Branch Richland Creek Beaver Creek	Mile 0.0 to 131.5 (Church Hill Bridge) At Holston River (Mile 1.0); Mile 0.0 to Origin At Holston River (Mile 6.7); Mile 0.0 to Origin At Holston River (Mile 10.8); Mile 0.0 to Origin Mile 0.0 to Origin At Roseberry Creek (Mile 1.7); Mile 0.0 to 0.5 Mile 0.5 to 0.7 Mile 0.0 to 8.0 Mile 0.0 to Origin At L. Flat Creek (Mile 1.3); Mile 0.0 to Origin Mile 8.0 to Origin Mile 8.0 to Origin Mile 0.3 to 1.9 At Lyon Creek (Mile 1.9); Mile 0.0 to Origin Mile 1.9 to Origin At Lyon Creek (Mile 2.7); Mile 0.0 to Origin At Holston River (Mile 2.7.1); Mile 0.0 to Origin At Holston River (Mile 30.4); Mile 0.0 to Origin	X	x x x	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Lost Creek at New Market Buffalo Creek Mossy Creek Mossy Creek Unnamed Branch	Sink at Mile 1.9 to Origin Below Buffalo Springs At Holston River (Mile 52.4); Mile 0.0 to 3.9 Mile 3.9 to Origin At Holston River (Mile 55.0); Mile 0.0 to Origin	X	X X	X X X X	X X X X	X X X X	X X X X		x x	
German Creek	At Holston River (Mile 70.2); Mile 0.0 to 8.1	X	X	X	X	X	X			
German Creek	Mile 8.1 to Origin At Holston River (Mile 75.2); Mile 0.0 to 1.2	х	x	Ŷ	Ŷ	Ŷ	Ŷ			
Turkey Creek Turkey Creek	Mile 1.2 to Origin			Ŷ	Ŷ	â	X			
Spring Creek Spring Creek Thompson Creek	At Holston River (Mile 76.0); Mile 0.0 to 1.2 Mile 1.2 to Origin Mile 0.0 to Origin	Х	X	X X X	X X Y	X X Y	X X X			
Fall Creek Fall Creek	At Holston River (Mile 80.7); Mile 0.0 to 1.0 Mile 1.0 to Origin	X	X	X X	X X	X X	X X			
Poor Valley Creek	At Holston River (Mile 89.2); Mile 0.0 to 6.8	X	X X	X	X	X	X			
Mooresburg Branch Mooresburg Branch Poor Valley Creek	Mile 0.0 to 1.6 Mile 1.6 to Origin Mile 6.8 to Origin	х	Х	X X X	X X X	X X X	X X X			
Beech Creek Big Creek (Stanley Prong)	At Holston River (Mile 108.8); Mile 0.0 to Origin Holston River (Mile 109.1); Mile 0.0 to Origin	x	x	X	X X	X X	X		x	

1200-4-4-.11 Holston River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Forgey Creck Unnamed Branch Stoney Point Creck Unnamed Branch Bradley Creck Holston River	At Holston River (Mile 116.9); Mile 0.0 to Origin At Forgey Creek (Mile 1.1); Mile 0.0 to 1.0 At Holston River (Mile 123.0); Mile 0.0 to Origin At Stoney Point Creek (Mile 0.2); Mile 0.0 to Origin At Holston River (Mile 128.8); Mile 0.0 to Origin Mile 131.5 to Origin (Mile 142.2)	x		X X X X X	X X X X X	X X X X	X X X X X X X X X			
Alexander Creek Unnamed Branch Alexander Creek Smith Creek Arnott Branch North Fork Holston River	At Holston River (Mile 131.9); Mile 0.0 to 3.4 At Alexander Creek (Mile 3.4); Mile 0.0 to 0.3 Mile 3.4 to Origin At Holston River (Mile 135.5); Mile 0.0 to Origin At Holston River (Mile 137.9); Mile 0.0 to Origin Mile 0.0 to 5.2 (Tenn-Virginia Line) Mile 0.0 to 2.3	х	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X X X X	X X X X X		x x	
South Fork Holston River Reedy Creek	Mile 0.0 to 7.1		X X X X	Ŷ	Ŷ	X	X			
Reedy Creek South Fork Holston River	Mile 7.1 to Tenn-Virginia Line Mile 2.3 to 5.7	Х	X	X	X	Х	Х			
Horse Creek	Mile 0.0 to 1.3		x	χ̈́	χ̈́	X	X			
Horse Creek Little Horse Creek Dolan Branch Unnamed Branch	Mile 1.3 to Origin At Horse Creek (Mile 3.6); Mile 0.0 to Origin At Little Horse Creek (Mile 2.8); Mile 0.0 to Origin At S.F. Holston River (Mile 4.0); Mile 0.0 to Origin		v	X X X	X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
South Fork Holston River	Mile 5.7 to 19.6	X	X X	Ŷ	Ŷ	Ŷ	Ŷ		X X	
Kendrick Creek Kendrick Creek	Mile 0.0 to 1.0 Mile 1.0 to Origin			X	Ŷ	X	X		Х	
Fall Creek	Mile 0.0 to Origin			X	X	X	X			
Unnamed Branch Sinking Creek	At S. F. Holston River (Mile 13.6); Mile 0.0 to Origin At S. F. Holston River (Mile 14.1); Mile 0.0 to Origin			â	â	â	â			
Ford Creek	Mile 0.0 to Origin		х	X	X	X	X			
Unnamed Branch Cedar Creek	At Ford Creek (Mile 1.3); Mile 0.0 to Origin At S. F. Holston (Mile 18.0); Mile 0.0 to 2.3		Х	X.	X	X	X			
Unnamed Branch	At Cedar Creek (Mile 2.3); Mile 0.0 to Origin			X	X	X	X			
Cedar Creek	Mile 2.3 to Origin At S. F. Holston (Mile 19.6); Mile 0.0 to 15.0	х	x	X	X	X	X			
Watauga River Boone's Creek	Mile 0.0 to Origin	Λ	^	â	Ŷ	â	â			
Knob Creek	Mile 0.0 to Origin			X	X	X	X			
Watauga River	Mile 15.0 to 16.4		X	X	X	X	X			
Brush Creek Lick Creek	Mile 0.0 to Origin Mile 0.0 to Origin			X V	₩	X V	X			
Watauga River	Mile 16.4 to 18.0	Х	X	Ŷ	Ŷ	Ŷ	Ŷ		x	
Watauga River	Mile 18.0 to 25.8		X X	X	X	X	X		X X	
Buffalo Creek	At Watauga River (Mile 22.1); Mile 0.0 to Origin			X	X	X	X			
Toll Branch	Mile 0.0 to 0.1			X	X	X	X			
Toll Branch	Mile 0.1 to Origin			÷	❖	Ŷ	÷			
Unnamed Branch Dry Creek	Mile 0.2 to Origin At Buffalo Creek (Mile 3.3); Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	Ŷ			
Unnamed Branch	At Buffalo Creek (Mile 3.0); Mile 0.0 to 0.2			Ŷ	Ŷ	Χ̈́	Ŷ			
Campbell Creek	At Watauga River (Mile 25.7); Mile 0.0 to Origin			X	X	X	X			

1200-4-4-.11 Holston River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Unnamed Branch Campbell Branch Watauga River Stony Creek Little Stony Creek Pierce Branch	At Campbell Creek (Mile 1.6): Mile 0.0 to Origin Mile 1.6 to Origin Mile 25.8 to 55.1 (N.CTenn. Line) Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x	x	X X X X X	X X X X X	X X X X X	X X X X X		X X	X X X
Bartree Branch Mill Creek North Fork Stony Creek Upper Hinkle Branch Doe River	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to 21.0	х	х	X X X X	X X X X	X X X X	X X X X		X X X	X X
Simerly Creek Clarke Creek Tiger Creek Roaring Creek Georges Creek Sugar Hollow Creek	Mile 0.0 to Origin	•	•	X X X X X	X X X X X	X X X X X	X X X X X			X X X X
Hampton Creek L. Prong Hampton Creek Shell Creek Cove Creek Laurel Fork Creek Little Laurel Fork	Mile 0.0 to Origin At Doe River (Mile 7.0); Mile 0.0 to Origin Mile 0.0 to Origin			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		XX	X X X X X X
Wagner Branch Buck Creek Doe River Little Stony Creek Elk River Black Branch	Mile 0.0 to Origin At Doe River (Mile 20.9); Mile 0.0 to Origin Mile 21.0 to Origin Mile 0.0 to Origin At Watauga (Mile 46.8); Mile 0.0 to 14.5 (Stateline) Mile 0.0 to Origin	X	x	X X X X X	X X X X	X X X X	X X X X		x	-
Row Branch Heaton Branch Little Laurel Branch Cobb Branch Cress Branch	Mile 0.0 to Origin	x	x	X X X X	X X X X	X X X X	X X X X		x	X X X X X
Roan Creek Doe Creek Spruce Branch Timothy Branch Campbell's Creek Roan Creek	At Watauga River (Mile 45.5); Mile 0.0 to 16.7 At Roan Creek (Mile 10.9); Mile 0.0 to Origin At Doe Creek (Mile 10.9); Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 16.7 to 17.7	^	^	X X X X	X X X X	X X X X	X X X X		x x	x
Mill Creek Stout Branch Vaught Creek Town Creek Town Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin At Roan Creek (Mile 17.7); Mile 0.0 to 0.2 Mile 0.2 to Origin	x		X X X X	X X X X X	X X X X X	X X X X X		•	X X X
Furnace Creek	At Town Creek (Mile 3.0); Mile 0.0 to Origin			X	X	X	X			Х

1200-4-4-.11 Holston River Basin (cont.)

STREAM	DESCRIPTION	DOM	rws	FAL	REC	LWW	IRR	NAV	TS	NRTS
Goose Creek Patrick Creek Roan Creek Corn Creek Forge Creek Brush Fork Creek Big Dry Run Creek Buffalo Creek	At Town Creek (Mile 3.0); Mile 0.0 to Origin At Goose Creek (Mile 2.6); Mile 0.0 to Origin Mile 17.7 to Origin Mile 0.0 to Origin	х		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X XX XX XX XX XX XX XX XX XX XX XX XX X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X X X	X X X
Gap Creek South Fork Holston River Muddy Creek Booher Creek Muddy Creek Unnamed Branch	Mile 0.0 to Origin Mile 19.6 to 35.5 (above Bluff City) At S. F. Holston (Mile 25.5); Mile 0.0 to 2.6 At Muddy Creek (Mile 2.6); Mile 0.0 to Origin Mile 2.6 to Origin At Muddy Creek (Mile 4.9); Mile 0.0 to Origin	x	X	X X X X	X X X X	X X X X	X X X X		X	
Beaver Creek Back (Beck) Creek Univac Branch Unnamed Branch Cedar Creek	At Middy Creek (Mile 4.9), Mile 0.0 to 9.1 At S. F. Holston (Mile 29.6); Mile 0.0 to 9.1 At Beaver Creek (Mile 6.1); Mile 0.0 to Origin At Beaver Creek (Mile 0.5); Mile 0.0 to Origin At Beaver Creek (Mile 7.3); Mile 0.0 to Origin At Beaver Creek (Mile 7.9); Mile 0.0 to Origin At Cedar Creek (Mile 3.2); Mile 0.0 to Origin		Х	X X X X	X X X X	X X X X X	X X X X			
Beeler Road Branch Raytheon Branch Beaver Creek Steele Creek Indian Creek Booher Creek	At Beeler Road Branch (Mile 1.2); Mile 0.0 to 0.2 Mile 9.1 to 15.3 (Tenn-Virginia Line) At Beaver Creek (Mile 11.0); Mile 0.0 to Origin At S. F. Holston (Mile 35.0); Mile 0.0 to Origin At Indian Creek (Mile 3.7); Mile 0.0 to Origin		x	X X X X	X X X X X	X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X X X			
Unnamed Branch South Fork Holston River	At Booher Creek (Mile 0.6); Mile 0.0 to Origin Mile 35.5 to South Holston Dam	x	х	X	X	X	X		X	
Unnamed Branch South Fork Holston River Big Creek Kendrick Creek	At S. F. Holston (Mile 39.1); Mile 0.0 to Origin South Holston Dam to mile 62.8 (Virginia Line) Mile 0.0 to Origin Mile 0.0 to Origin	х	x	X X X	X X X	X X X Y	X X X		x	x
Fishdam Creek Sulphur Springs Branch Sharps Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X		x	X X
Little Jacobs Creek Jacobs Creek Jacobs Creek Jacobs Creek Jacobs Creek	Mile 0.0 to Origin At S. F. Holston (Mile 59.8); Mile 0.0 to 3.4 Mile 3.4 to 3.6 Mile 3.6 to Origin	X	X X	X X X X	X X X X	X X X X	X X X X		Ť-	X X X X X X
Harpers Creek Rockhouse Run Creek Laurel Creek Beaverdam Creek	Mile 0.0 to Origin Mile 0.0 to Origin Stateline to Origin Stateline to Origin			X X X	X X X	X X X	X X X			X X X X
London Bridge Br Reservoir Branch Stillhouse Branch Chalk Branch	Stateline to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X X	X X X X	X X X X	X X X X		X	X X

1200-4-4-.11 Holston River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Chestnut Branch Haunted Hollow Branch Fagall Branch Birch Branch Parks Branch David Blevin Branch Johnson Branch Jim Wright Branch Ledford Branch W. Fk Beaverdam M. Fk Beaverdam E. Fk Beaverdam Lyons Branch Gentry Creek Dry Branch Grindstone Branch Flatwood Branch Corum Branch West Fork Laurel Creek	Mile 0.0 to Origin			X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X	X XX XX XX XX XX XX XX XX XX XX XX XX X	X X X X X X X X X X X X X X X X X X X		x x	X X X X X X X X X X X X X X X X X X X
All other surface tributaries named and River Basin, with the exception of wet which have not been specifically noted	weather conveyances.			x	x	x	x			

1200-4-4-.12 LOWER CUMBERLAND RIVER BASIN.

STREAM DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Cumberland River Saline Creek Mile 74.6 (Ky-Tenn Line) to 11: Saline Creek Mile 0.0 to Hwy 120 Saline Creek Hwy 120 to Fort Campbell bound Fort Campbell Boundary to Origin Bear Creek Highway 49 to Origin Highway 49 to Origin Wells Creek Wells Creek Mile 0.0 to Origin Wells Creek Mile 0.0 to Origin Mile 3.4 to Ruskin Cave	arv	X X X X	X X X X X X X	X X X X X X X X X	X X X X X X X X	X X X X X X X X	х	x x x	

1200-4-4-.12 Lower Cumberland River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW IRR	NAV	TS	NRTS
Cumberland River Cumberland River Red River Red River Red River South Fork Red River Big West Fork Little West Fork Sulphur Fork Sulphur Fork Sulphur Fork Sulphur Fork Carr Creek Red River Summers Branch Hurricane Creek Sulphur Springs Cr Harpeth River Jones Creek Town Branch Harpeth River Trace Creek Sullivans Branch Beaver Dam Creek Gin Branch Brush Creek	Mile 118.3 to 125.3 (Red River) Mile 125.3 to 175.7 (Richland Creek) Mile 0.0 to 2.0 Mile 2.0 to 15.0 Mile 15.0 to 51.2 (Ky-Tenn Line) Mile 20.4 (Ky-Tenn Line) to Origin Mile 0.0 to 14.6 (Ky-Tenn Line) Mile 0.0 to 10.4 Mile 0.0 to 26.6 Mile 26.6 to 28.6 Mile 28.6 to Origin Mile 0.0 to Origin Mile 10.3 to 52.8 Mile 0.0 to Origin	DOM X X X X X X X X X	IWS XXXXX XXXXX XXXXXX XXXXXXXXXXXXXXXXX	FAL XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	REC XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X X X X X X X X X X X X X X X X X X X	XXXXXX	TS	NRTS
Cancy Fork Creek Harpeth River Harpeth River Harpeth River Little Harpeth River Little Harpeth River Cartwright Creek Harpeth River West Harpeth River Harpeth River Spencer Creek	Mile 0.0 to Origin Mile 52.8 to 55.8 Mile 55.8 to 57.8 Mile 57.8 to 61.9 (Little Harpeth) Mile 0.0 to Origin Mile 61.9 to 68.3 (Cartwright Creek) Mile 0.0 to Origin Mile 68.3 to 79.0 Mile 0.0 to Origin Mile 79.0 to 85.2 Mile 79.0 to 85.2 Mile 0.0 to Origin	X X X	X X X X X X	X X X X X X X X X	X X X X X X X X	X X X X X X X X X X X X X X X X X X X			
Spenter Creek Harpeth River Sycamore Creek Sycamore Creek	Mile 85.2 to Origin Mile 85.2 to 10.0 Mile 0.0 to 10.0 Mile 10.0 to Origin	X X X	X X						
Marrowbone Creek Marrowbone Creek Cumberland River Richland Creek Whites Creek Ewing Creek	Mile 0.0 to 3.0 Mile 3.0 to Origin Mile 175.7 to 189.5 Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	X X X	X X X	X X X X X	X X X X X	X X X X X X X X X X X X X X X	x		<i>7</i>

1200-4-4-.12 Lower Cumberland River Basin (cont.)

STREAM	DESCRIPTION	DOM	īws	FAL	REC	LWW	IRR	NAV	TS	NRTS
Cumberland River Mill Creek Mill Creek	Mile 189.5 to 216.2 (Old Hickory Dam) Mile 0.0 to 11.5 Mile 11.5 to 23.0	Х	X X	X X X	X X X	X X X	X X X	x		
Mill Creek Stones River Stoners Creek	Mile 23.0 to Origin Mile 0.0 to 6.8 Mile 0.0 to Origin Mile 0.0 to Origin	X	X	X X	X	X X X	X X			
McCrory Creek Stones River (Percy Priest Res.) Suggs Creek Smith Springs Creek Hurricane Creek Stewart Creek Harts Branch	Mile 6.8 to 38.7 (Confluence-East & West Fork) Mile 0.0 to Origin	х	х	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Fall Creek & Tributaries East Fork Stones River Bradley Creek Cripple Creek	Mile 0.0 to Origin Mile 0.0 to 44.5 (Near Woodbury) Mile 0.0 to Origin Mile 0.0 to Origin	Х	Х	X X X	X X X	X X X X	X X X			
East Fork Stones River East Fork Stones River	Mile 0.0 to Origin Mile 44.5 to 45.2 Mile 45.2 to Origin	х	X X X	X	X	X	X			
West Fork Stones River Overall Creek	Mile 0.0 to 10.0	X		X	X	X	X			
West Fork Stones River West Fork Stones River	Mile 0.0 to Origin Mile 10.0 to 15.2 Mile 15.2 to Origin	x	X X	X X	X	X X	X			
Lytle Creek Middle Fork Stones	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	X	X	X	Ŷ	Ŷ	Ŷ			
Christmas Creek Cumberland River	Mile 216 2 to 300 2 (Caney Fork River)	x	x	Ŷ	Ŷ	Ŷ	Ŷ	x		
Drakes Creek	Mile 216.2 to 309.2 (Caney Fork River) Mile 0.0 to 4.9	X X	X	Ŷ	Ŷ	Χ̈́	x	X		
Drakes Creek	Mile 4.9 to Origin			X	X	X	Х			
Smiths Creek	Mile 0.0 to Origin			X	X	X	X			
Çedar Çreek	Mile 0.0 to 2.0	X	X	X	X	X	₽ X	X		
Cedar Creek	Mile 2.0 to Origin	х	Х	÷.		Ą-	❖	х		
Spencer Creek	Mile 0.0 to 2.8 Mile 2.8 to Origin	^	Λ	Ŷ	Ŷ	Ŷ	Ŷ	^		
Spencer Creek Bartons Creek	Mile 0.0 to Origin			Ŷ	Ŷ	Ŷ	ି 🛣			
Sinking Creek	Mile 0.0 to Origin			X	X	X	$\ddot{\mathbf{x}}$			
Big Goose Creek	Mile 0.0 to Origin			X	X	X	Х			
Little Goose Creek	Mile 0.0 to Origin			X	X	X	. X			
Round Lick Creek	Mile 0.0 to Origin			Х	X	Х	Х			
All other surface waters named and un Basin (and Green River Basin), with t	named in the Lower Cumberland River he exception of wet weather									
Basin (and Green River Basin), with t conveyances, which have not been spe	cifically noted shall be classified.			X	X	X	X			

1200-4-4-.13 Upper Cumberland River Basin.

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Cumberland River Caney Fork River Mulherrin Creek	Mile 309.2 to 385.5 (Ky-Tenn Line) Mile 0.0 to 25.4 Mile 0.0 to Origin	X X	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X	X	
Hickman Creek Smith Fork Creek	Mile 0.0 to Origin Mile 0.0 to Mile 3.0			X	X	X	X		X	
Smith Fork Creek Dry Creek	Mile 3.0 to Origin Mile 0.0 to Origin			X	X	X	X		X X	
Jones Fork Caney Fork River	Mile 0.0 to Origin Mile 25.4 to Origin	X X	X	X	X	X	X		Х	
Mine Lick Creek Mine Lick Creek	Mile 0.0 to 5.0 Mile 5.0 to Origin			X	X	X	X			
Falling Water River Falling Water River	Mile 0.0 to 39.0 Mile 39.0 to Origin	Х		X	X	X	X			
Cane Creek	Mile 5.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X	X	X	X			
Pigeon Roost Creek Fall Creek	Mile 0.0 to Origin Mile 2.4 to Origin			X	X	X	X	83	x	
Pine Creek Turner Branch	Mile 0.0 to 0.5			· X	X	X	X		X X X	
Sink Creek Collins River	Mile 4.6 to Origin Mile 0.0 to 43.0	X	X	χ̈́	X	χ̈́	X			
Mountain Creek Charles Creek	Mile 0.0 to 6.0 Mile 0.0 to 9.0 Mile 0.0 to 4.5			Ŷ	X	X J	X		X	
Barren Fork River Barren Fork River	Mile 4.5 to Origin	X	X	ŷ	Ŷ	X	X		X X	
Hickory Creek W.F. Hickory C	Mile 19.0 to 24.0 Mile 0.0 to Origin			ŷ	Ŷ	Ŷ	X		^	
Keel Branch Hills Creek	Mile 0.0 to Origin Mile 0.0 to Origin	v		ŷ	â	ŷ	ŷ		X X	
Collins River Big Creek	Mile 43.0 to 49.0 Mile 0.0 to 6.0	X X		ŷ	ŷ	Ŷ	ŷ		^	
Big Creek Collins River	Mile 6.0 to Origin Mile 49.0 to Origin	••		X.	X	X	ŷ			
Caney Fork River Rocky River	Mile 92.2 to Origin Mile 0.0 to 9.0	X X X X X	X X X X	X	X	X	X		37	
Rocky River Rocky River	Mile 9.0 to 13.0 Mile 13.0 to Origin	X	X	X	X	X	X		Х	
Calfkiller River Calfkiller River	Mile 0.0 to 14.1 Mile 14.1 to 30.8	X X	X X	X	X	X	X			
Town Creek Calfkiller River	Mile 0.0 to Origin Mile 30.8 to Origin	X X	X X	X	X	X	X		X X	
Cane Creek Falls Creek	Mile 1.0 to 8.0 Mile 0.0 to Origin			X X	X X	X	X X		Х	
Cane Creek	Mile 8.0 to Origin	Х	Х	X	Х	X	X			

X

X

X

1200-4-4-.13 Upper Cumberland River Basin (cont.)

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
Bee Creek Bee Creek Wilkerson Creek Frey Branch	Mile 0.0 to 7.3 Mile 7.3 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x		X X X	X X X	X X X	X X X			
Roaring River Roaring River Spring Creek Bear Creek	Mile 0.0 to 29.9 Mile 29.9 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x		X X X X	X X X X	X X X X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Carr Creek Carr Creek Town Creek	Mile 0.0 to 4.2 Mile 4.2 to Origin Mile 0.0 to Origin	X		X X X X	X X X X	X X X	X X X X		v	
Goose Creek Flynns Creek Obey River Neely Creek	Mile 0.0 to 12.0 Mile 0.0 to 5.0 Mile 0.0 to 7.3 Mile 0.0 to Origin (3.3 miles)	x	X	X X X	X X X	X X X	X X X		X X X X	£
Wolf River Wolf River Town Creek Obey River	Mile 0.0 to Ky State Line Ky State Line to Origin Mile 0.0 to Origin Mile 7.3 to confluence of East and West Forks	х	x x	X X X	X X X	X X X	X X X		X	
West Fork Obey River East Fork Obey River Buffalo Cove Creek Rock Castle Creek	Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin Mile 0.0 to Origin	x		X X X	X X X X	X X X X	X X X			
Big South Fork Cumberland River No Business Creek Parch Corn Creek Station Camp Creek Laurel Fork Creek North White Oak Creek	Mile 55.5 (Ky-Tenn Line) to Origin (Mile 77.0) Upper 4.0 miles Upper 1.5 miles Upper 4.8 miles Upper 4.9 miles Upper 3.9 miles	х	х	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X X X X X	
Williams Creek Pine Creek Pine Creek New River New River	Upper 7.6 miles Mile 0.0 to 10.5 Mile 10.5 to Origin Mile 0.0 to 15.0 Mile 15.0 to Origin	x x		X X X X	X X X X	X X X X	X X X X		Х	
Clear Fork River Elk Fork Creek	Mile 0.0 to Origin Mile 1.8 (KY Line) to Origin	x		X	x	â	x			

All other surface waters named and unnamed, within the Upper Cumberland River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified

October 24, 2003; effective January 7, 2004.

Authority: T.C.A. §§4-5-201, et seq. and 69-3-105. Administrative History: Original rule filed July 13, 1999; effective October 11, 1999. Amendment filed

 \mathbf{x}

1200-4-4-.14 Barren River Watershed

STREAM	DESCRIPTION	DOM	IWS	FAL	REC	LWW	IRR	NAV	TS	NRTS
West Fork Drakes Creek Caney Fork Creek Dry Fork Creek	Mile 33.0 (stateline) to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			
Middle Fork Drakes Creek Sulphur Fork Creek Dutch Creek	Mile 22.2 (stateline) to Origin Mile 9.0 (stateline) to Origin Mile 0.0 to Origin	х		X X X	X X X	X X X	X X X			
Trammel Creek Little Trammel Creek	Mile 30.7 (stateline) to Origin Mile 4.7 (stateline) to Origin			X X	X X	X X	X			
Long Creek West Fork Long Creek	Mile 14.6 (stateline) to Origin Mile 0.0 to Origin			X X	X X	X X	X X			
Puncheon Creek Unnamed Tributary	Mile 4.3 (stateline) to Origin Mile 0.0 to Origin	x		X X	X X	X X	X			
(Adams Spring) Little Puncheon Creek Spring Creek	Mile 0.0 to Origin Mile 0.0 to Origin	x		X X	X X	X X	X X			
Salt Lick Creek Salt Lick Creek Salt Lick Creek Lick Creek Long Fork White Oak Creek Long Hungry Creek	Mile 4.7 (stateline) to mile 6.8 Mile 6.8 to mile 9.9 Mile 9.9 to Origin Mile 4.5 (stateline) Origin Mile 4.1 (stateline) to Origin Mile 0.0 to Origin			X X X X	X X X X X	X X X X X	X X X X X		x	
Line Creek Trace Creek Little Trace Creek	Mile 14.2 (stateline) to Origin Mile 0.0 to Origin Mile 0.0 to Origin			X X X	X X X	X X X	X X X			

All other surface waters named and unnamed, within the Barren River Basin, with the exception of wet weather conveyances, which have not been specifically noted shall be classified

 \mathbf{X} \mathbf{X} \mathbf{X}

Legal	Contact	and/or	party who	o will	approve	final (сору:	

Alan Leiserson 20th Floor, L&C Tower 401 Church Street Nashville, TN 37243 (615) 532-0131

Contact for disk acquisition:

Greg Denton 7th Floor, L& C Annex 401 Church Street Nashville, TN 37243-1534 (615) 532-0699

Signature of the agency officer directly responsible for proposing and/or drafting these rules:

Paul E. Davis

6th Floor, L& C Annex 401 Church Street

Nashville, TN 37243-1534

(615) 532-0643

The roll-call vote by the Water Quality Control Board on these rulemaking hearing rules was as follows:

NAME OF BOARD MEMBER	Aye	No	Abstain	Absent
Mr. Larry Clark Ms. Jill Davis Mr. Eddie Floyd Mr. Jim Haynes Mr. John McClurkan Mr. Frank McGinley Ms. Ann Murray Dr. Robert Taylor Mr. Bob Wormsley	X			

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I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Water Quality Control Board on the 24th day of 2006.
Further, I certify that these rules are properly presented for filing, a notice of rulemaking hearing having been filed in the Department of State on the 28 th day of October, 2005, and such notice of rulemaking hearing having been published in the November 15, 2005 issue of the Tennessee Administrative Register, and such rulemaking hearings having been conducted pursuant thereto on the 3 rd , 5 th , 9 th , 10 th , 11 th , 12 th , and 18 th days of January, 2006.
Chairperson, Tennessee Water Quality Control Board
Subscribed and sworm to be tree me this the state day of October 2006. Notary Public Notary Public ARGE My commission expires of the 22 day of County. OUNTY. OUNTY. OUNTY. 22 2008
All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5. Robert E. Cooper, Jr. Attorney General and Reporter
The rulemaking hearing rules set out herein were properly filed in the Department of State on the day of, 200 and will become effective on the day of Riley C. Darnell Secretary of State By: